

The Business of Last Chance Tourism: Stakeholders' Perspectives

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

Last Chance Tourism (LCT) is argued as a new form of travel behaviour emerging because of climate change. Some tourism stakeholders and communities have already begun adapting to climate changes they have experienced. Therefore, the purpose of this research was to explore the dynamics between climate change and business planning of tourism stakeholders at two chosen case study sites, the Athabasca Glacier in Jasper National Park and Polar Bear tourism at Churchill, Manitoba. This research focused on understanding climate change perceptions, adaptation strategies, and marketing efforts of stakeholders at the study sites.

The research used mixed methods approach with an interpretive paradigm for analysis. This study conducted semi structured interviews with 17 participants from the study sites, 10 from Jasper National Park, and seven from Churchill, Manitoba. In addition to interviews, 20 stakeholder websites from each study site were analyzed to understand how images play a role in branding.

The results revealed that climate change is and will pose challenges for stakeholders. The majority of participants, 56%, were either moderately or extremely concerned about climate change. This research confirms and adds detail to previous studies on adaptations and LCT. Many of the participants thought LCT had negative implications, with only two participants suggesting they would think about using it as a marketing technique. Participants have already been making adaptations due to environmental changes, and believe they will adapt when necessary in the future. While only 47% of participants said they have a marketing strategy for their specific destination, the analysis of the 40 websites revealed the chosen websites use images of the Athabasca Glacier or polar bears for a majority of website images.

While this exploratory study was important to understand stakeholder perceptions at each location, future studies need to examine both adaptive capacity and ethical implications of marketing LCT more in depth. Marketing LCT may lead to more people getting involved in climate change discussions, which could help create community adaptations. The Jasper National Park data revealed stakeholder relationships are very complex with multiple participants criticizing Parks Canada for allowing recent new tourism developments. Future studies could explore deeper into these relationships, this may enable better coordination among stakeholders for planning adaptations.

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Dedication

For Dad.

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Chapter One: Introduction

Balmford et al. (2015) recently undertook a study to gauge protected area visitation on a global scale. The researchers focused on terrestrial protected areas (PAs), these areas cover one-eighth of the world's land and are a major focus of nature-based recreation and tourism (Balmford et al., 2015). Data on visit rates to over 500 PAs were compiled and region specific models were built to predict variations in visitation in relation to the properties of PAs and local socioeconomic conditions. The models were then used to estimate visit rates to all but the smallest of the world's terrestrial PAs. Balmford et al. (2015) were then able to derive approximate estimates of the global extent and economic significance of PA visitation. Results of this study suggest "the world's terrestrial PAs receive approximately 8 billion visits per year ... [with] 3.3 billion visits per year in North America" (Balmford et al., 2015, p. 3). Balmford et al. (2015) also estimate this number of visits could generate approximately US \$600 billion per year worldwide of global gross direct tourism expenditure. Balmford et al. (2015) state "these results quantify, we believe for the first time, the scale of visits to the world's PAs and their approximate economic significance" (p. 4).

Within Canada, nature-based tourism is a significant source of revenue and cultural identity. Canada's system of national parks represents a major resource for nature-based tourism opportunities (Jones & Scott, 2006). In the fiscal year 2008/09, park organizations spent \$0.8 billion, while visitors to parks spent \$4.4 billion (Outspan Group, 2009). The economic impacts to the Canadian economy generated as a result of this spending to Canada's national, provincial and territorial parks were (Outspan Group, 2009):

- Gross Domestic Product (GDP) \$4.6 billion
- Labour Income \$2.9 billion
- Employment 64,050 full time equivalents
- Tax Revenue \$0.3 billion

As for national parks specifically, the contribution is immense:

- GDP \$2.5 billion (55.5%)
- Labour Income \$1.6 billion (55.7%)
- Employment 35,061 (54.6%)
- Tax revenue \$172.1 million (51.3%)

A principal determinant of nature-based tourism in Canada is the climate (Jones & Scott, 2006). Climate-induced changes increase the vulnerability of the rare and threatened physical features and the natural and cultural heritage often found in protected areas (Wilson, Espiner, Stewart, Purdie, & Depatie, 2014; Lemieux, Beechey, & Gray, 2011). Climate influences the physical resources that provide the foundation for nature tourism and related outdoor recreation, as well as the length and quality of tourism and recreation seasons (Jones & Scott, 2006). Climate change effects have already been implicated in a variety of coincident impacts, including precipitation patterns, changing severe weather patterns, and changes in ecosystem structure and function (Lemieux et al., 2011). Changes to the length and quality of tourism operating seasons including those induced by global climate change, will pose risks and opportunities not only for parks and nearby communities, but also for tour operators who rely on natural resources for their business. Longer warm seasons may be advantageous for businesses by being able to provide more recreation opportunities. But seasonality changes might cost businesses more, for example business having to

change marketing techniques and brochure information, as well as a change in seasons could cause negative environmental effects from overuse.

The link between climate and outdoor recreation is well established and the literature has proven that many leisure activities are linked to either cold winter weather or hot summer weather (Buckley & Foushee, 2011; Scott & Lemieux, 2010). Recent research displays how climate change has already caused seasonal changes to occur within the nature-based recreation tourism sector. Buckley and Foushee (2011) looked at recreational visits to 55 parks during 1979-2008 from the National Park Service and found of the nine parks that experienced significant temperature increases since 1979, 78% exhibited shifts in the timing of peak attendance.

Tourists have a relatively high adaptive capacity, while many tourism destinations lack this capacity, it seems some may be combating their lack of capacity by promoting their destination as a “disappearing attraction” (Dawson et al., 2011). Dawson et al. (2011) state “It appears that destinations are increasingly being prioritised and marketed based on vulnerability in order to take advantage of the economic opportunities associated with ‘disappearing’ attractions” (p. 251). It is becoming common place for news outlets and bloggers to identify these types of destinations and make lists of “places to see before they disappear”.

There are two notable studies in the Last Chance Tourism (LCT) literature that explore the relationships between destinations labelled as LCT and business planning. Olsen, Koster & Youroukos (2012) conducted research looking at whether or not stakeholders of destinations labeled as LCT by publications such as *Frommer's* and *Newsweek*, use this LCT designation as a part of their marketing and promotional efforts. Olsen et al. (2012) found that none of the participants were aware their

destination was on these lists and only one participant thought the LCT designation would aid in environmental awareness. Olsen et al. (2012) reports the majority of participants were upset about being designated as LCT and did not employ any LCT marketing programs. They also found that only two of 11 respondents indicated they felt LCT could be part of future marketing strategies.

Wilson et al. (2014) reported on stakeholders of the Fox and Franz Joseph glaciers in Westland Tai Poutini National Park on the west coast of New Zealand's South Island. They concentrated on stakeholders' perspective on environmental change at the glaciers and the business management implications of such change (Wilson et al., 2014). Results indicated stakeholders believed the glaciers were the main reason tourists visit the area, they believe if the glaciers are not present, people will not visit. Wilson et al. (2014) also indicated stakeholders believed managing for change is part of 'business as usual' in the region.

In both Olsen et al. (2012) and Wilson et al. (2014) the locations researched are cases of LCT. For this study, LCT the phenomenon is being studied. The destinations and tourism at these destinations (Glacier Tourism in Jasper National Park and Polar Bear Tourism in Churchill, Manitoba) are the units of analysis or the cases of LCT. Using Olsen et al. (2012) and Wilson et al. (2014) as guides, this research uses the chosen destinations as representative of LCT destinations and aims to contribute to the body of LCT literature by delving deeper into understanding the business planning (i.e. marketing and branding) of stakeholders at the selected case study sites, the Athabasca Glacier in Jasper National Park and Polar Bear tourism in Churchill Manitoba. Therefore, *the purpose of this research was to explore the dynamics between*

climate change and business planning of tourism stakeholders at two chosen case study sites.

In an attempt to achieve this purpose, three primary objectives were developed:

1. To investigate how stakeholders in Churchill, Manitoba and Jasper National Park, Alberta conduct marketing.
2. To examine stakeholder perceptions of climate change within Churchill Manitoba, and Jasper National Park
3. To explore climate change adaptive strategies undertaken by stakeholders in Churchill, Manitoba and Jasper National Park, Alberta.

To meet these objectives the following research questions were answered:

1. What marketing strategies are stakeholders employing?
2. Do stakeholders take advantage of the Last Chance Tourism phenomenon for economic gain at each respective case study location?
3. Have stakeholders made adaptations to deal with climate change impacts?
4. Are stakeholders prepared to make adaptations necessary to deal with climate induced impacts?
5. Is there a difference between how concerned stakeholders are about climate change personally or professionally?

Answering these questions will help tourism and protected areas stakeholders better understand how climate-induced biophysical changes to resources housed within protected areas may stimulate a diversification in nature-based tourism products within protected areas. The results of this study will also help elucidate how

stakeholders have adapted, or plan to adapt, business planning and practice to deal with destination specific environmental changes. Overall, the research offers a novel examination of the emerging LCT travel phenomenon, and how it relates to tourism and protected areas marketing and branding, business planning, and management, and will provide important insights for other protected area jurisdictions and tourism stakeholders who are beginning to grapple with addressing the implications of this emerging travel phenomenon.

Chapter Two: Literature Review

2.1 Climate Change

Scientific evidence confirms climate change is happening; the experience of extreme or unusual weather patterns by people around the world support this evidence (Holden, 2008). While weather is often confused with climate, climate is a combination of weather events of a minimum of three decades. Holden (2008) defines climate change as:

Change in the climate of an area or the whole world over an appreciable period of time. That is, a single winter that is colder than average does not indicate climate change. It is the change in average weather conditions from one period of time (30-50 years) to the next. (p. 212)

In the last century, the global mean air temperature close to the surface rose by 0.6°C; in the latter half of the century the trend was most evident (Holden, 2008). The rate of increase exceeds any that has happened in the past 20,000 years, while the present levels of CO₂ concentration are the highest in the last 420,000 years. Carbon dioxide forms one of the greenhouse gases (GHGs), which possess a chemical structure that enables them to absorb and re-emit heat (Holden, 2008). In the latest assessment report by the Intergovernmental Panel on Climate Change (IPCC) it is reported that the decade of the 2000's has been the warmest decade at the Earth's surface of any of the previous decades in the instrumental record (IPCC, 2014). "There is incontrovertible evidence from *in situ* observations and ice core records that the atmospheric concentrations of GHGs such as CO₂, CH₄ and N₂O have increased substantially over the last 200 years" (IPCC, 2014 p. 129).

In the broader climate change literature, it is commonly understood that responses to climate change vary from place to place (Ernst & van Riemsdijk, 2013). Often urban areas, regional initiatives and the lack of national leadership are focused on in the literature. Climate change response traditionally stemmed from international and national initiatives to mitigate GHG emissions under the umbrella of the United Nations Framework Convention on Climate Change (Baker, Peterson, Brown, & McAlpine, 2012). Climate change concerns have gained the attention of local stakeholders all over the world and as a result, international and national programmes to assist local jurisdictions to develop local climate action plans have been emerging (Baker et al., 2012). For example, the Cities for Climate Protection Programme provided technical assistance to more than 650 local jurisdictions worldwide (Baker et al., 2012). The importance of adaption is also gaining momentum and preliminary research in developed countries indicates implementing effective local adaptation plans may be difficult for local governments to do alone (Baker et al., 2012).

Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation is a report that focuses on new information and knowledge, assessing advances made in understanding climate change impacts and adaptation from the perspective of several industries (Warren & Lemmen, 2014). This report confirms that climate change is increasingly affecting Canada's natural environment, economic sectors and human health.

The annual average surface air temperature in Canada has warmed 1.5°C during the period 1950-2010 (Warren & Lemmen, 2014). Warming has been observed consistently all over Canada, but stronger trends have been found in the north and west. Warming in Canada is generally observed in all seasons, with the greatest

warming occurring in winter and spring (Warren & Lemmen, 2014). Temperature trends updated since 2008 indicate that cold events continue to decrease while warm events continue to increase (Warren & Lemmen, 2014). Analysis to infer changes indicates that extreme minimum temperatures have warmed more than extreme high temperatures, with the trends being much stronger in the Canadian Arctic than in southern Canada (Warren & Lemmen, 2014).

The Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation outlines key concerns for natural resources (Chapter 3), biodiversity of protected areas (Chapter 6) and Adaptations (Chapter 9) (Warren & Lemmen, 2014). Key findings for the natural resources sector show that climate change will present new opportunities, particularly in relation to northern economic development. Consideration of multiple stressors is critical to understanding adaptation in the natural resource sectors (Warren & Lemmen, 2014). Environmental assessment, risk disclosure, and sustainable forest management reporting are examples of processes that can help advance adaptation actions in the future.

Some of the key findings for biodiversity and protected areas sector were that climate related shifts in species distributions have already been documented in Canada. For several species the current and projected rates of environmental change are likely to exceed their natural ability to adapt, which will likely increase stress and threaten biodiversity (Warren & Lemmen, 2014). As a result, climate change is magnifying the importance of managing ecosystems to enhance resilience and preserve biodiversity. Protected areas will play an important role in the conservation of biodiversity in a period of rapid change (Warren & Lemmen, 2014).

Northern countries such as Canada face the effects of climate change more severely compared to the rest of the world (Ernst & van Riemsdijk, 2013). Climate change and adaptation are key concerns for Canada, especially protected areas in Canada. The total number of protected areas in Canada now exceeds 9.9% (Lemieux et al., 2011). Lemieux et al. (2011) explain climate change adaptation planning in protected areas is important for three reasons:

(1) Climate change is already impacting protected areas ecosystems and other natural assets; (2) despite efforts to reduce GHG emissions, some level of human-induced change will occur in the twenty-first century; and (3) proactive adaptation will be more cost effective and efficient than reactive responses in reducing the potential for irreversible impacts. (p. 676)

Reducing GHGs is necessary to lessen the magnitude and rate of climate change, but even with aggressive global mitigation efforts additional impacts are unavoidable, therefore, we also need to adapt (Warren & Lemmen, 2014). We need to make adjustments in our activities and decisions in order to reduce risks, moderate harm or take advantage of new opportunities. Adaptation is accepted as a necessary response to climate change, complementing global measures to reduce greenhouse gas emissions (Warren & Lemmen, 2014). Adaptation enhances the social and economic resilience of Canadians to climate change impacts. Adaptation is occurring with increasing frequency and enhanced engagement. Continued action will help to build capacity, address information needs and overcome challenges. Collaboration and adaptive management are approaches that governments and industry are increasingly pursuing to advance adaptation.

2.1.1 Climate Change and Tourism

Although undoubtedly climate change is occurring, there is still uncertainty in the science of climate change predictions; therefore, how exactly tourism will be affected by climate change is ultimately uncertain. Climate changes will affect nature-based tourism by impacting the natural and physical resources that define destinations and which they are dependent on (Scott, Jones, Konopek, 2007). Melting ice caps, rising sea-levels, reduced snowfall, changing ecosystems (including biodiversity loss) will inevitably have implications for tourism (Holden, 2008). As well, wildlife tourism, one of the most popular forms of tourism in North America, could be largely affected by ecosystem change and the loss of biodiversity.

Scott and Lemieux (2010) describe the relationship between climate and tourism as multifaceted and highly complex. They use Figure 1 to describe the temporal scales in which climate influences different subsectors of tourism, either directly (blue lines) or indirectly (black and red lines). Climate is a macro scale factor influencing the tourism industry, though some argue it is the most dominant factor affecting global tourist flows (Scott & Lemieux, 2010).

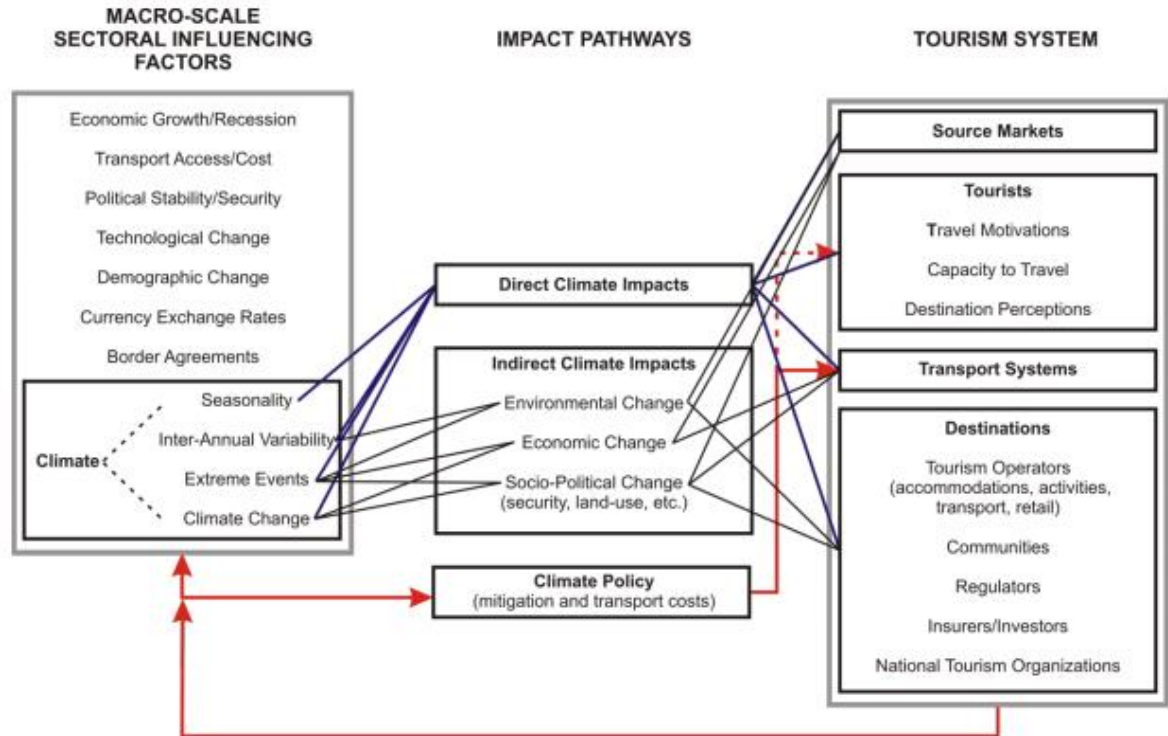


Figure 1. Climate influences on the tourism sector

Many destinations use climate as a main tourist draw (de Freitas, 2005). Climate contributes to the regional resource base for tourism. With the climatic changes affecting weather patterns, tourism destinations can be negatively, positively or neutrally affected (Ebi, 2011; Scott & Lemieux, 2010). For instance, Scott and Lemieux (2010) state:

Climate variability that brings extreme weather events such as heat waves, unseasonable cold, drought or storms and heavy rain, which can affect not only tourist comfort and safety (and thereby satisfaction), but also the products that attract tourists (snow cover, coral reefs, wildlife for example). (p. 147)

These destinations may be portrayed negatively in the media, changing potential tourist's perceptions, affecting the tourist decision-making processes (Hall & Higham, 2005). Hall and Higham (2005) suggest "climate change can directly impact tourist

behaviour because of changed perceptions not only of the climatic appeal and image of certain destinations but also the activities that can be engaged in” (p. 13). This does not necessarily mean people will stop travelling, but travel preferences in both space and time will change due to seasonality and visitor flow changes. Some existing destinations may be less attractive due to physical and ecosystem changes (such as species loss) which may have an enormous impact on nature-based tourism areas. On the other hand, others areas may become more attractive.

Although there are over 30 years of relevant climate and tourism research to draw on, our understanding of the potentially profound consequences of global climate change on the tourism sector remains limited (Scott, Wall, & McBoyle, 2005). Climate change has been identified as the “greatest challenge to the sustainability of the global tourism industry in the 21st century” (UNWTO-UNEP-WMO, 2008 as cited in Dawson et al., 2010). It is estimated that the tourism industry contributes to approximately 5% of total CO₂ emissions. There is an underlying paradox associated with tourism to climate vulnerable destinations as long-haul air travel is often necessary to reach remote locations (Dawson et al., 2010). Tourism destinations in Polar Regions are thought to be particularly vulnerable to climate change as they are expected to exhibit some of the first signs of environmental change (Dawson et al., 2010). Travel to remote locations such as Polar Regions contributes to the demise of the attraction through the emission of GHGs.

2.2 Last Chance Tourism

With environmental changes already being seen at some popular tourism destinations, it has been argued that a new form of travel behaviour has emerged: Last Chance Tourism (LCT). Dawson et al. (2011) explains the concept of LCT first emerged

in popular press and the tourism industry to describe increased tourism interest to vanishing destinations. Lemelin et al. (2010) state “this travel trend has been reported in the media as ‘disappearing tourism’, ‘doom tourism’, and ‘last chance tourism’, and specifically when climate is a decisive factor, ‘climate tourism’” (p. 478). Lemelin, Stewart, and Dawson (2012) say the phrase can be characterized as a “last chance to consume, collect, or photograph rare or exotic specimens” (p. 3). LCT can be defined as “tourists explicitly seek vanishing landscapes or seascapes, and/or disappearing natural and/or social heritage” (Lemelin et al., 2010, p. 478).

Dawson et al., (2011) explain how LCT is a function of several interacting variables, Figure 2 shows the variables present in LCT:

(1) global environmental change (including climate change) and (2) externalities (such as habitat loss and habitat conversion) both of which directly affect the (3) vulnerability of the tourism resource (e.g. biophysical or cultural resources, or a combination thereof) which in turn affect (4) demand is also influenced by externalities (e.g. media coverage) and contributes to GHG emissions associated with travel to LCT destinations, which further exacerbates the vulnerability of the tourism resource. (p. 252)

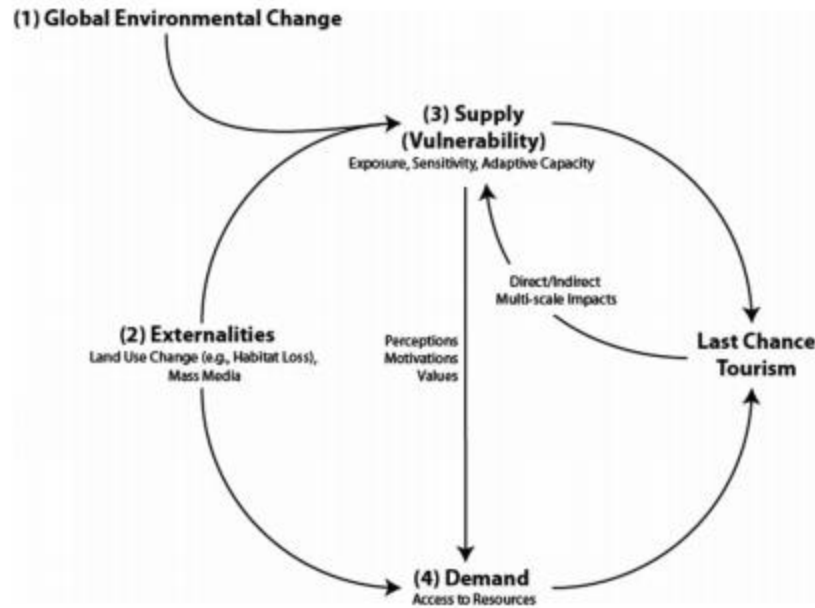


Figure 2. Interacting variables of LCT

The destinations most often profiled in popular press as LCT are vulnerable to changing climate conditions such as the Arctic and Antarctic, the Galapagos Islands, the Great Barrier Reef, Mt. Kilimanjaro, and the Maldives (Dawson et al., 2011). Last chance experiences are advertised by mainstream literature, travel blogs and other forms of modern media (Lemelin et al., 2012). Tourists may be motivated by concern of these destinations, but labelling a destination as last chance can be dangerous. Lemelin et al. (2010) state while attention can help to raise awareness of problems, and may promote conservation efforts, “it can also attract more tourists seeking to undergo such experiences before they are gone forever, therefore accelerating negative impacts” (p. 478).

A number of ethical concerns are associated with LCT. LCT could offer destinations short-term opportunities to capitalise on negative environmental impacts, some tourists are highly motivated to visit vulnerable destinations (Dawson et al., 2011). Dawson et al. (2010) examined the carbon cost of polar bear viewing in

Churchill, Manitoba, they found the majority of individuals travelling for the purpose of viewing polar bears were strongly motivated by the stated vulnerability of the species and indicated that they wanted to see the bears before they disappear forever from this area. LCT has an inherent paradox associated. The release of GHGs emissions via air travel is a significant contribution to climate change; therefore these trips contribute to the deterioration of the very destinations being visited.

Dawson et al. (2011) states, LCT is more about “(1) the perception of vulnerability among the general public and (2) that which is perceived to be vulnerable, than it is about the exact attributes of a particular destination” (p. 255). Therefore, a combination of marketing, public perception, values, and management techniques may play significant roles in determining LCT destinations. Frew (2008) explains the marketing of LCT displays the ability of the tourism sector to easily respond to changing demand, by quickly developing popular climate change related tours. This speaks to the tourism industry’s ability to adapt to a changing environment and visitor demand. But, a key question Dawson et al. (2011) asks is “whether it is morally appropriate for the tourism industry to market vulnerable attractions as a tactic to achieve increased tourist visitation and revenues” (p. 257).

Olsen et al. (2011) set out to understand if tour operators were actively using LCT as a marketing technique. Through a series of interviews with stakeholders listed on *Frommer's 500 Place to See Before They Disappear* and *Newsweek's 100 Places to Remember Before They Disappear*, Olsen et al (2011) found a strong reluctance towards the use of LCT within marketing strategies. One respondent in the study stated: “I think people should visit this beautiful area to participate in its perseverance, not attend its funeral” (p. 111). None of the respondents were aware their destinations

were even on the lists and a couple were concerned with their destination being listed. Another respondent commented “Our mission...is to preserve and protect this unique place for today and future generations. A designation like last chance leaves little hope for those future generations” (p. 111). Therefore, this study suggests that the destinations are not using the LCT idea for marketing, but media outlets are promoting the idea.

Environmental, social and economic discourse can help examine the effects of LCT and identify the benefits and challenges associated with managing it (Dawson et al., 2011). There are a number of deficiencies in our understanding of the long-term environmental and social impacts climate change will have on the tourism industry. LCT can be seen as one way that the tourism industry is adapting to these changes, but is it ethically and morally responsible to promote and market destinations as last chance?

2.3 Vulnerability and Adaptive Capacity in the Tourism Industry

Societies are vulnerable to climate risks and other factors, and this vulnerability can act as a driving force for adaptive resource management (Adger & Vincent, 2005). Vulnerability is defined by Smit, Burton, Klein, and Street (1999) as the “degree to which a system is susceptible to injury, damage, or harm” (p. 200). The IPCC (2014) defines vulnerability as “the propensity or predisposition to be adversely affected” (p. 564). Gallopin (2006), states that vulnerability is often conceptualized as being composed of components that include exposure to external stresses, sensitivity to perturbations, and the capacity to adapt. This conceptualization is similar to Adger and Vincent’s (2005) formula, vulnerability is equal to exposure + sensitivity + adaptive capacity. Engle (2011) illustrates these three components of vulnerability explaining:

Exposure is the extent to which the system is physically in harm's way; sensitivity is how affected a system is after being exposed to the stress; and adaptive capacity represents the system's ability to prepare for and adjust to the stress, mainly to lessen the negative impacts and take advantage of the opportunities. (p. 649)

Vulnerability can be conceptualized within a system, a system can be vulnerable if exposed to climate change impacts, but only if the system is sensitive to those impacts and if it has a low capacity to cope with those impacts (Adger & Vincent, 2005). Systems can be vulnerable to certain disturbances and not others. This is due to the uncertainties in a system; the range of possible impacts is the range of exposure (Adger & Vincent, 2005). These ranges of uncertainty are associated with sensitivity to change and with the capacity to adapt to these changes. The susceptibility to a potential change of the system is therefore the vulnerability of the system (Gallopin, 2006).

To understand what organizations can do to reduce vulnerability, adaptive capacity and possible adaptations need to be explored. The adaptability of a system is the ability to prepare for stresses and changes in advance or adjust and respond to the stress (Engle, 2011). The goal of adaptation is to reduce vulnerability and impacts of climate stimuli or their effects. Increasing adaptive capacity improves the opportunity of systems to manage varying ranges of climate impacts, while allowing for flexibility to rework approaches (Engle, 2011). Smit & Wandel (2006) suggest adaptation in the context of human dimensions of global change refers to a process, action or outcome in a system in order for the system to better cope with, manage or adjust to some changing condition.

Communities which are able to respond to change quickly and easily are considered to have high adaptability or adaptive capacity (Smit & Wandel, 2006). Adaptive capacity is highly influenced by governance, management, and institutions within communities. Practical initiatives that improve societal adaptive capacity, reducing vulnerability, are commonly expected to be evident at the community scale (Smit & Wandel, 2006). Engle (2011) suggests there is much to gain by examining preparation for and responses to recent climatic events to understand how adaptive capacity can assist in future climate change circumstances.

Lemelin et al. (2010) reported on important themes that emerged from stakeholder's discussion of climate-induced changes and adaptability. Churchill stakeholders being able to adapt and continue to be 'resourceful and inventive in light of change' were common, with one respondent stating:

Climate change has the potential to change the landscape of business here in Churchill...I don't think we'll lose it completely, we'll adapt. It would be devastating if we lost the ice and what-not. No, we won't die, we would adapt. (p. 485)

Clear adaptations were not reported, but respondents had a positive outlook on their ability to adapt in the future. Adger (2003) suggests that communities are limited in their ability to adapt by their ability to act collectively and social capital. Trust and organizations greatly influence the capability of communities to act collectively. Communities reliant on environmental resources that are highly vulnerable to climate change must work together in order to adapt and thrive in the future.

Scott, de Freitas, and Matzarakis (2009) suggest climate adaptations in the tourism-recreation sector are comprised of a complex mix of adaptations undertaken by diverse stakeholders. Scott et al. (2009) developed Figure 3 as a conceptual framework for considering adaptation to changes in tourism climate. Figure 3 shows the range of spatial and temporal scales adaptations can be influenced by; as well it indicates that while tourists have a high adaptive capacity, tour operators, resort and hotels, and communities do not. Scott et al. (2009) state that adaptations are rarely undertaken in isolation, but rather stakeholders in the tourism-recreation sector utilize multiple adaptation options. They also suggest “individual adaption options are sometimes also undertaken by several different stakeholders in the sector (e.g., marketing by tourism businesses, communities and countries), sometimes in isolation and sometimes collaboratively” (p. 174).

Scott et al. (2009) provide four ways tourism -recreation operators can adapt to climate changes. The first is technical adaptations; these types of adaptations are already widely used in the ski industry around the world. For example, “snowmaking is the most widespread climate adaptation used by the ski industry and has become an integral component of the ski industry in some regions” (Scott et al. 2009, p. 179).

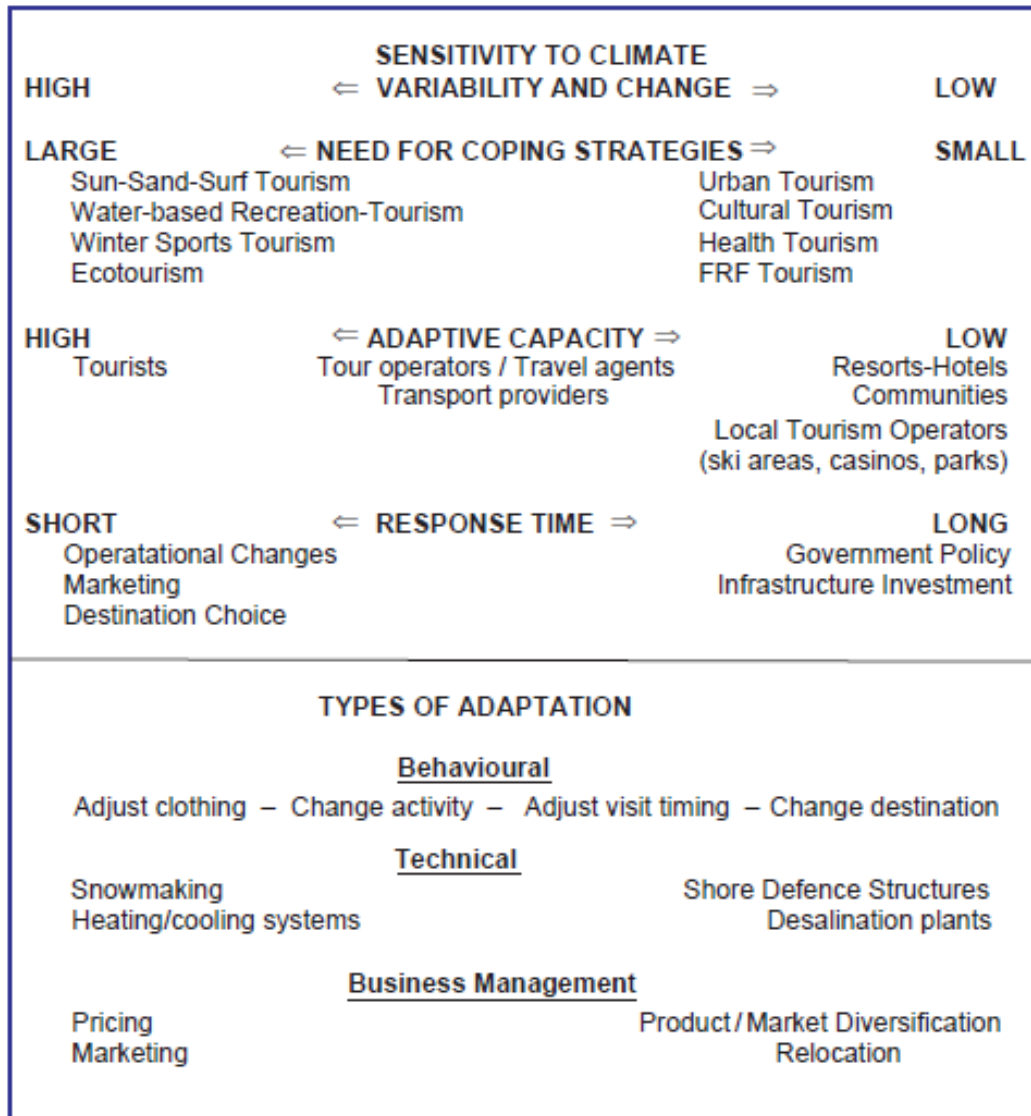


Figure 3. Framework for considering adaptation to changes in tourism.

The second adaptation is business management. Scott et al. (2009) state “product and market diversification are common adaptation strategies to increase demand during low seasons” (p.181). For example many ski resorts diversified their business operations to become ‘four season resorts’, many now offer non-winter activities such as golf, mountain biking, or horseback riding. Scott et al (2009) does suggest that small-medium size enterprises or operators are at greater risk to poor climatic conditions because they do not have substantive economic reserves or access

to capital when peak seasons are poor. Marketing is also another business strategy that can be used to adapt to natural seasonality or climate change (Scott et al., 2009). Scott et al. (2009) state “‘Last chance’ marketing for climate change threatened destinations is still relatively rare, but an increasing market trend among tourism operators in regions where climate change impacts are clearly observable (p. 183). They suggest being labelled as ‘last chance’ or discussed as a threatened destination can “inspire future articles in travel magazines and climate change related marketing by opportunistic tour operators” (p. 183).

The third adaption suggested by Scott et al. (2009) is policy changes. Although few corporate policies on climate change exist in the tourism-recreation sector, policy changes can focus on mitigation efforts and contribute to larger scale adaptations.

The fourth and final adaptation suggested for tourism-recreation operators is public education. Scott et al. (2009) suggest there are a number of examples of tourism-recreation operators already participating in public education on climate change. Often the operator’s intention is to raise awareness and influence personal behaviours that contribute to climate change mitigation (Scott et al., 2009).

2.4 Business of Tourism

Tourism is widely known as an important industry in the global economy, it is an economic, environmental, and social force of global proportions (Trunfio, Petruzzellis, & Nigro, 2006, Wall, 1992). Supply and demand remains relevant to every business sector and market including tourism. The demand side of tourism is defined as the participants and tourists themselves (Wall, 1992). The supply side of an industry is often defined by the establishments that create particular products. In the tourism industry, “the product is an experience through the combination of a diverse array of

products and services” (Wall, 1992, p. 4). Wheeler (1995) states there are three tourism product zones:

- The tourist generating zone, which is geographical and is a resource base which determines the ability of the tourist to travel;
- The host zone, which is geographical and also consists of a network of social and political institutions and resources which shape the host's attitudes towards tourists; and
- The zone of interaction and interpretation – the tourist-destination zone changes both temporally and spatially – it is not simply a geographic entity but also a psychological and social one that exists within a place.

The ways in which destinations and stakeholders market the experiences they offer provides the public with expectations and the identity of the destination. Wheeler (1995) explains the “degree of satisfaction gained from the experience relates to the expectations of the tourist, the degree of reality on which those expectations were based and the ability of the tourist to adapt to perceived realities” (p. 41), this is the link between tourism and marketing.

Destinations can be defined in a variety of ways, but traditionally destinations are defined as being divided by geographical (i.e. country, island, or town) or political barriers, this division fails to consider consumer preferences or tourism industry function (Buhalis, 2000). Cai et al. (2009) suggest there are two ways to define destinations. The first is more conventional and business-oriented, defining destinations as geographical units in a hierarchy from self-contained centers to cities. This method is useful for economic planning and statistical purposes; it is supply-driven and considers tourists as economic consumers (Cai et al., 2009). The second

defines a destination in sociocultural terms, regarding them as structures and images unconstrained by geographical boundaries and developed by continuous process of social interactions. Instead of seeing tourists just as consumers, this definition sees them as social actors seeking interactions in a tourism space. The quality of these interactions determines the quality of the experience which affects the place attachment of the tourism space (Cai et al., 2009).

Both definitions of Cai et al. (2009) provide important attributes of a destination. Economic prosperity and tourist satisfaction are important for destinations long term success. Tourism dependent communities have a low adaptive capacity, as shown in Figure 1, therefore, climate change can severely impact operations and limit long term success. Buhalis (2000) states “destinations are amalgams of tourism products, offering an integrated experience to consumers” (p. 97). Consumers attribute positive, neutral and negative feelings towards destinations based on experiences had (Mohsin, 2005). The perception and image of a destination becomes part of the perceptual process of the tourists (Wheeler, 1995). Therefore, branding and brand imaging play an important role in attracting tourism.

2.4.1 Branding

Brand elements, slogans, taglines and images play an essential role in destination identity building (Cai et al., 2009). Tourism branding can be found in many categories of goods and services influencing diverse facets of activities. Hall (1999) define a brand in general terms, with its core objective being to produce consistent, focused communication with potential clients. Nickerson and Moisey (1999) define branding as “what images people have of a destination and what kind of relationship they have with it” (p. 217). Branding a destination often involves offering value for

touristic consumption, using a destination's natural, cultural and economic dimensions as capital (Cai et al., 2009).

Marketing and branding is dominated by the conventional approach of product, price, place, and promotion (4Ps) (Cai et al., 2009). Although, recently there are more contemporary marketing innovations in practice and theory such as experience marketing, relationship marketing and personal marketing. Cai et al. (2009) suggest these innovations all aim at attracting and retaining customers through building relationships and creating positive experiences. However, the contemporary concepts are constrained by conventional economic theories of rationality that are underpinning the 4Ps. Cai et al. (2009) state “in a society where purchasing and consumption decisions are increasingly emotional, conventional theories of rationality in economic terms alone cannot answer all the questions” (p. 5).

Tourism producers use brand identity to compete in a global market place. A brand enables tourism producers to charge more money for their products and services (Cai et al., 2009). Brands also give tourism destinations the responsibility of maintaining and enhancing destination reputation. The role of branding is critical for destinations and locations whose names already exist and are not replaceable.

Internet influences on branding

The more powerful information technologies have become, the more user-friendly they are, enabling more people and organizations to take advantage of them (Buhalis, 1998). Tourism is especially affected by the new possibilities of the global information age because tourists film or take photos of their holidays. Tourists rarely rely solely on official brochures, official websites or travel guides to research destinations. Ye, Law, Gu, and Chen (2011) state that one-third of travel purchasers

visited a message board, forum, or online community before making travel purchases because they believed online reviews would be helpful. Cai et al. (2009) state “any tourist can be a global image-maker or story teller by uploading information onto the Internet” (p. 28). Ye et al. (2011) also report that more than 74% of travelers use the comments of other consumers as information sources when planning trips for pleasure. In addition to reviews, TripAdvisor allows multimedia elements such as photos, videos or travel maps of previous trips to be uploaded and users can take part in discussion forums (Miguens, Baggio, & Costa, 2008). The internet enables broad communication to take place between tourists, potential tourists and destination stakeholders.

2.4.2 Marketing

Marketing of products or services requires strategic action plans and approaches be developed (Mohsin, 2005). As previously discussed, the tourism product is the experience tourists have derived from encounters with destination stakeholders (Mohsin, 2005). Analyzing product markets and forecasting how they will change in the future are essential to organizational survival (Heath & Wall, 1992). The decision about how to best serve the market is what strategic market planning is all about (Heath & Wall, 1992). In tourism, several key factors exist in order to provide an effective marketing strategy. Understanding destination types and characteristics is a paramount importance for a marketing strategy (Buhalis, 2000). Marketing in tourism is a unique endeavour, every destination has distinctive characteristics.

2.4.3 Destination Marketing

Commonly marketing and management of destinations is left to industry professionals and consultants, Buhalis (2000) suggests destination marketing is not

frequently discussed in academic literature. This may be because common academic pursuits in destination tourism often focus on the impacts of tourism on resources rather than marketing techniques. Buhalis (2000) states “although there is plenty of literature on destination planning and development of facilities, there are few textbooks examining destination marketing, and even fewer illustrate destinations as an experience provider for tourists and locals” (p. 98). Destination marketing should be a focus of researchers interested in destination management and resource mitigation as marketing facilitates tourism policy and regional development strategic planning (Buhalis, 2000).

Traditionally, like marketing any other commodity, destination marketing concentrates on increasing visitation volumes and profits. This approach is limited because it fails to recognise the unique qualities of destinations such as individual geographical, environmental and socio-cultural characteristics (Buhalis, 2000). Local resources are central assets for destinations and tourism suppliers, these resources are what draw and create experiences for visitors. The sustainability of these resources needs to be a core function of tourism marketing. Middleton and Hawkins (1998) state that “a marketing perspective is essentially an overall management orientation reflecting corporate attitudes that, in the case of travel and tourism, must balance the interests of shareholders/owners with the long-run environmental interests of a destination and at the same time meet the demands and expectations of customers” (p. 8).

Companies and governments have only applied promotion to tourism marketing with little to no attention being paid to the other components of the marketing mix (price, product, and place) (Buhalis, 2000). Buhalis (2000) suggests that if tourism aims

to generate satisfaction among visitors, societal marketing strategies must be adopted. Along with Cai et al. (2009), Buhalis (2000) recommends rather than just focusing on increasing the number of tourists, destinations should focus on tourist satisfaction levels and host reactions to tourists, using these as part of the criteria for success.

2.4.4 Stakeholders and Marketing

Managing and marketing destinations can be very challenging; there are many different actors and stakeholders involved in the development and production of tourism products. Tourists' overall experience is composed of numerous small encounters with a variety of tourism principal's such as taxi drivers, hoteliers, waiters, as well as with elements of the local attractions (Buhalis, 2000). The relationships between stakeholders as well as between stakeholders and regional tourism organizations are complex, and can make marketing initiatives difficult to implement (Sautter & Leisen, 1999). Figure 4 demonstrates the dynamic wheel of tourism stakeholders. The experiences offered at a destination are essentially comprised of the resources, and amalgams of tourism facilities and services (Buhalis, 2000). These factors do not belong to individual stakeholders; they represent the collection of both professional and personal interests of all the people living in the area. The environmental, social and cultural systems are of special significance to stakeholders as they represent the economic potential of the destination (Wall, 1992). One of the most difficult problems is ensuring the rational use of the public goods for the benefit of all stakeholders while at the same time preserving resources for future generations.

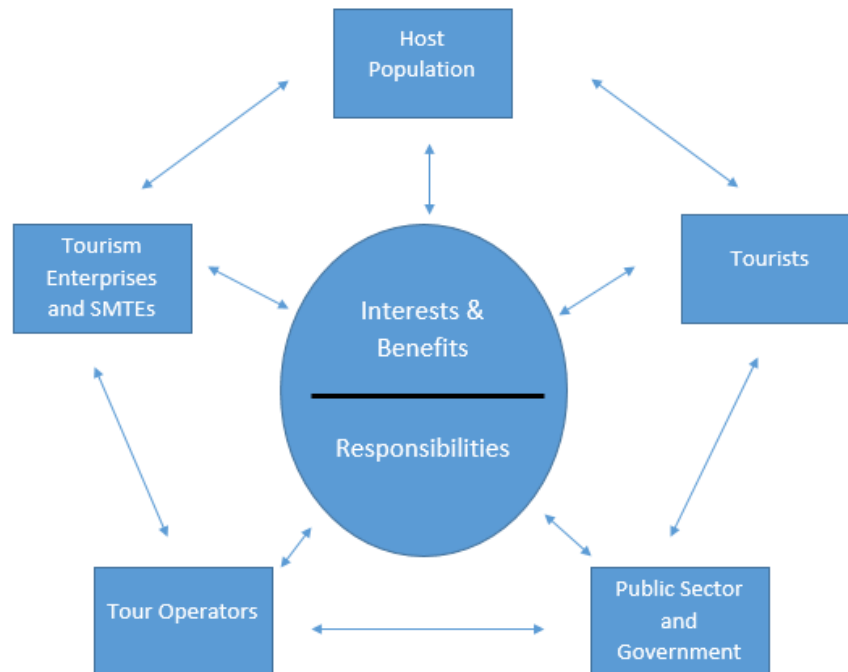


Figure 4. The dynamic wheel of tourism stakeholders

Destination management and marketing should act as tools and facilitators to achieve a complex range of strategic objectives which will ultimately need to satisfy the needs and wants of stakeholders. Buahlis (2000) states there are four key generic strategic objectives that should be addressed by Destination Management Organizations (DMOs), these are:

- Enhance the long-term prosperity of local people;
- Delight visitors by maximising their satisfaction;
- Maximise profitability of local enterprises and maximise multiplier effects; and,
- Optimise tourism impacts by ensuring a sustainable balance between economic benefits and socio-cultural and environmental costs.

Stakeholders aim to maximise the benefits emerging for them. Inevitably, the interests of some stakeholders may be conflicting with others and thus, some of the four key strategic objectives may be jeopardised. Failure to ensure and maintain a balance effectively jeopardises relationships between stakeholders, and threatens the achievement of the strategic objectives and the long-term competitiveness and prosperity of destinations. It is therefore imperative for DMOs to use legislative and management tools during planning and management of destinations in order to ensure that the benefits of tourism activity is shared fairly between all stakeholders and sustainable practices safeguard the regenerations of resources utilised for the production of tourism (Buhalis, 2000).

2.4.5 Business and Marketing Ethics

The traditional product life cycle was applied to the tourism industry by Butler in the early 1980s, to create what is now commonly referred to as Butler's Model (Walle, 1995). But, because tourism often involves several different stakeholders each destination is a special case with destination specific needs and problems, and cannot use universal business strategies and tactics (Walle, 1995). Destination specific strategies need to be forged when dealing with a variety of stakeholders. Walle (1995) states "the uniqueness of the tourism industry dictates that long-term strategies should be guided by the principles and orientations of our field, not by generic paradigms from business which largely developed in the manufacturing industries" (p. 266).

To understand the ethical issues surrounding marketing tourism, we must first understand ethical orientations in the business field. There is thought to be a continuum of ethical orientations in business thought ranging from: Social Obligation,

Social Responsibility, and Social Responsiveness. A comparison of these categories is presented in Table 1 (Walle, 1995 p. 264).

Table 1. Ethical orientations in the business field.

	Social obligation	Social responsibility	Social responsiveness
General overview	Legal and profitable	Current social problems are responded to	Future social and/or environmental problems are anticipated and addressed.
Choosing options	The sole consideration aside from profitability is legality	Decisions respond to social issues which overtly need to be addressed	Decisions are based on an anticipation of future needs and/or social problems even if they do not impact on the firm and/or are not caused by it
Strategies are evaluated with reference to:	Is the strategy legal? Is the strategy profitable enough (however measured)?	Has the organization responded to problems and issues which have merged as significant?	Future problems are addressed even if the organization is not directly involved in causing them.

Although the tourism industry is different from most industries, it often faces similar ethical issues and can use these three categories to determine how to proceed. Three key concepts emerge when looking at business ethics in tourism (Walle, 1995):

- The concept of ‘progress’ is not a central or unifying concept within tourism theory and ethics;
- The product which tourism provides may be destroyed or undermined by pressures created by the industry; and
- The needs of all relevant stakeholders must be addressed when tourism strategies are being forged.

Walle (1995) applies these specialized tourism concepts to the ethical orientations as presented in Table 2.

Table 2. Tourism concepts applied to ethical orientations

Tourism perspective	Social obligation	Social responsibility	Social responsiveness
'Progress' is not inevitable or inherently beneficial	Since the concept of 'progress' is not universal or inevitable, we should not place an overreliance upon it in our strategies and tactics	Tourism has a responsibility to encourage development which meshes with the local environment and culture, not in accordance with the universal concept of 'progress'	Since 'progress' leads to concomitant changes in culture and the environment, tourism strategy should be appropriate and mitigate its impacts.
Tourism can be undermined by pressures of the industry	Change wrought by tourism might undercut the industry. Such potentials should be prevented and mitigated when doing so is a good tactic	Tourism causes negative impacts and pressures on people and the environment which should be mitigate	The industry has both practical and ethical reasons to respond to impacts on the environment and local people
All relevant stakeholders need to be considered when strategies are forged	Government regulation and loan conditions might demand responding to the needs of all relevant stakeholders	Tourism should respond to the needs of various stakeholders which are impacted on by the industry	The industry should anticipate future impacts from various sources and respond in proactive ways

As discussed, tourism marketing revolves around the creation of awareness, tourism resources, and the creation of destination image. When considering the ethical implications of marketing tourism destinations, the marketers decisions must balance the individual ethic (individual beliefs and values), the professional ethic (those dictated by marketing professionals), and the organizational ethic (local government) (Wheeler, 1995). Marketing ethics is defined by Wheeler (1995) as “an inquiry into the

nature and ground of moral judgements, standards and rules of conduct relating to marketing decisions and marketing situations” (p. 39).

The perception and image of a destination becomes part of the tourist's decision-making process. These perceptions lead to the formation of expectations which help shape behaviours of tourists while at a destination. Brochures and websites reinforce the images people develop of potential destination areas. The images formed can make a particular area or facility look better or more attractive to potential tourists. This is a way to create competition between tour operators and stakeholders in a region. These images also impact tourists' behaviour at a destination. If a tourist perceives a destination as possessing a degree of fragility, they may respond with more responsible behaviour. Wheeler (1995) states “while there is not an automatic link between attitude and behaviour, at least certain cognitive predispositions are set in motion” (p. 43). This creation of awareness in the tourists is a massive role that marketing from an ethical perspective can be responsible for.

Davis (1992) explains “a common theme of discussion about ethics and marketing is the idea of truth, specifically the distinction between consumer and scientific truth in product claims” (p. 81). Consequences of violating marketing ethics can be both short and long term. For example, Lemelin et al. (2010) reports a German cruise operator who promised a journey through meter-thick pack ice was sued and lost because a passenger was disappointed when there was not meter thick pack ice because of climate change. The judge found the lack of pack ice was a deficiency of the trip, and had indeed been promised in the brochure. In addition to short-term consequences, violating marketing ethics can produce severe harm both at the individual and societal levels (Wheeler, 1995).

2.4.6 Marketing and Climate Change

Dodds (2010) looked at the opportunities and challenges that climate change poses to Canadian DMOs. DMOs are often tasked with marketing their region to travel consumers and travel trade intermediaries (Dodds, 2010). DMOs in Canada are private, not-for-profit industry associations with an independent board of directors and they bridge various sectors within the tourism industry.

Impacts of climate change have already been seen and experienced around the world and DMOs are situated to address the issues of climate change in the tourism industry. Dodds (2010) aimed to understand and identify barriers and incentives necessary to influence the tourism industry in Canada to increase their level of participation in addressing effects of climate change.

Results indicated most participating DMOs across Canada agreed that climate change was a very important factor in tourism's future viability. An interesting finding Dodds (2010) presents is that the importance of climate change was divided geographically by DMOs; she attributed this divide to coastal and arctic areas being more sensitive to climate change and experiencing some of the first climate change impacts. Dodds (2010) also reports DMO participants felt the challenge posed by climate change on the tourism industry was a lack of awareness and action both within the industry and government and among consumers. "Concerns included there was a still a lack of clarity on the issue of climate change, funding was not available to make necessary changes and there was lack of knowledge of best practices to mitigate or adapt to impacts" (Dodds, 2010, p. 3454).

When DMO participants were asked what actions would be most helpful to support tourism suppliers in Canada with respect to climate change, participants

commonly expressed a desire for accurate information and standardization from the government. Participants reported that they believe businesses would act more quickly where there is a financial or legal motivation. Dodds (2010) concluded that “although climate change is becoming an increasingly important issue to many DMOs and their members, there is little action for climate change mitigation or adaptation” (p. 3459).

2.4.7 Marketing Last Chance Tourism

Olsen et al. (2012) explored public sector employee’s views of using last chance tourism designation as a marketing tool. Olsen et al. (2012) selected public sector stakeholders from destinations listed in *Frommer’s 500 Places to See Before They Disappear* (Travis, 2009), and *Newsweek* (2010) list of 100 places around the world that are endangered. The study asked four main questions:

1. Are you aware that your destination has been listed in either *Frommer’s* and/ or *Newsweek*?
2. Would you consider this designation as a ‘last chance tourism’ destination a benefit to your destination marketing-wise? Why or why not?
3. Is the designation of your destination as a ‘last chance tourism’ destination used in any of your tourism promoting materials? If so, how? If not, why not?
4. Do you foresee ‘last chance tourism’ designations as being an important part of future tourism marketing? Why or why not?

Results indicated that none of the stakeholders who participated knew their destination was listed on either the *Frommer’s* or *Newsweek* lists. Many of the respondents were concerned at being listed as a last chance tourism destination and

asked the researchers what criteria was used to create these lists (Olsen et al., 2012). In addition, respondents felt the catch phrase 'last chance tourism' had negative connotations associated and that it implies there is no hope for their destinations. One respondent stated "I think people should visit this beautiful area to participate in its preservation, not attend its funeral" (Olsen et al., 2012, p. 109). Some respondents also thought the term last chance tourism was baseless and a marketing ploy to sell guidebooks.

Olsen et al. (2012) also found most of the stakeholders listed on either *Frommer's* or *Newsweek* indicated they would not use the 'last chance tourism' phrase in their marketing for a variety of reasons, such as the phrase would give a negative view of destinations to potential visitors (Olsen et al., 2012). For future marketing, only two respondents indicated using LCT designation would be possible. One respondent felt that "local businesses will try to capitalize on the last chance designation to pull in more visitor dollars" (Olsen et al., 2012, p. 111). Lemelin et al. (2010) suggests LCT can be a motivating factor for tourists; they also agree marketing destinations as LCT add negative connotations to the destination and can create unique challenges for managers.

Chapter Three: Methods

3.1 Case Study Sites

Two case study sites were chosen for this study. Glacier visitation of the Athabasca Glacier located in Jasper National Park, Alberta and polar bear viewing in the region of Churchill Manitoba. These two sites represent highly-popular tourism destinations, as well as locations currently affected by climate change.

3.1.1 Athabasca Glacier Tourism in Jasper National Park, Alberta

The Athabasca Glacier is located along the Icefields parkway in Jasper National Park in Alberta, Canada. Jasper National Park was established in 1907 and is located in the southern Canadian Rockies (Figure 5), approximately 360 km west of Edmonton, Alberta (Parks Canada, 2010). The park spans 11,228 km² of broad valleys, rugged mountains, glaciers, forests, alpine meadows and wild rivers, and it is the largest of the southern mountain national parks. Parks Canada (2010) reports “each year approximately two million people visit the park where they enjoy a range of facilities” (p. 1).

The municipality of Jasper is located inside the park has a population of 5,236 people with a total area of 925.52 km²; it is a cornerstone for the regional tourism industry (Statistics Canada, 2015b; Municipality of Jasper, 2011; Parks Canada, 2010). The employment rate in Jasper is 82.9% with 13 employment industries identified. The top five listed are: Accommodation and food service (720), Transportation (330), Health care and social assistance (240), Arts, entertainment and recreation (230), and Retail trade (220) (Statistics Canada, 2015b). Tourism industry was not an option within the census.



Figure 5. Jasper National Park location map (Travel Alberta, 2014)

The Jasper National Park of Canada Management Plan aims to ensure conservation of ecological and cultural resources in the park and strengthen Canadians' connection with their heritage. The management plan outlines four areas of concentration to achieve this: (1) Planning in Partnership; (2) Protection; (3) Visitor

Experience; and (4) Education and Outreach (Parks Canada, 2010). Through Planning in Partnership, the new park management was developed; more than 20 separate public participation events, from public forums to workshops to school visits and Aboriginal community visits, supported a rich and productive dialogue about the future of the park (Parks Canada, 2010). Currently under Protection, the main goal described in the management plan is the importance of protecting vibrant scenery, wildlife, and healthy ecosystems which are at the heart of Jasper's ongoing attraction and the prerequisite for a sustainable tourism industry. In the future, Jasper managers plan to implement measures to maintain or restore ecological integrity to the park. Under Visitor Experience the management plan describes that a main concern for Parks Canada is to ensure national parks have continued relevance in a changing, more urban Canada. The management plan states "the park will work with Brewster Transportation and Tours to update the Icefields Centre area" (Parks Canada, 2010, p. 4). The last area of concentration, Education and Outreach, describes promoting dialogue and lifelong passion for parks and healthy landscapes. The action plan outlines actions to be taken to transform the Palisades into a national centre of excellence for stewardship education and training.

Glaciers are major tourist draws in some countries. In New Zealand, the Franz Josef and Fox glaciers in Westland Tai Poutini National Park are amongst the most accessible in the world. These glaciers are already retreating. Recent climate glacier modelling indicates by 2100, the Franz Josef glacier will recede from a length of 11 km to 6.4 km and shed 62% of its volume (Wilson et al., 2014). These changes will dramatically affect tourism flows and business in New Zealand. In western North America, glaciers are important tourist attractions, although they have been retreating over the past century and are projected to continue to retreat (Scott et al., 2007). Many

attribute the current speed of retreat of glaciers around the world to human induced climate change and a recent U.S. state of the union report singled out the rapid melt of glaciers as a major climate change issue (Graveland, 2014).

The Athabasca Glacier is the most visited glacier on the North American continent (Parks Canada, 2014). The Athabasca Glacier is one of the six principal toes that flow out of the Columbia Icefields on the mountain heights and is 300 meters thick in some places (Strandberg, 2010). Tourists from around the world have the opportunity to not only see the glacier from the Columbia Icefields parkway, but can take a trip upon huge snow coaches and get an up-close look walking on the glacier. Brewster (2014) describes its Columbia Icefield Glacier Adventure as:

This tour takes visitors onto the surface of the Athabasca Glacier by Ice explorer a massive vehicle specially designed for glacial travel. And experienced drive-guide shares a wealth of fascinating information about glaciers, icefields, and their impact on our environment during this one hour and 20 minute journey.

Although the Athabasca Glacier is an iconic feature of Jasper National Park, it has been receding for the last 125 years, losing over half of its volume (Parks Canada, 2014). Since 1843 the toe of the Athabasca Glacier has retreated 1.5 km leaving a moonscape of rocky moraines in its wake (Parks Canada, 2014; Strandberg, 2010). Studies of the thickness of the glacier indicate it is 60% smaller in volume than it was a century and a half ago. The Athabasca Glacier is the most accessible and largest of six ice sheets that form the Columbia Icefields. In an interview with The Canadian Press, John Wilmschurst expressed astonishment in the rate of retreat of the Athabasca Glacier:

Every year we drive stakes five metres deep into the glacier in the fall. We have to return and re-drill them in mid-summer because a lot of those stakes on the Athabasca Glacier, the one that a lot of people go visit, will be lying flat on the ice at that time. (Graveland, 2014)

The Athabasca Glacier and the climate change impacts it is experiencing are of national and international significance. In addition to being a significant tourist attraction for the region, the Athabasca glacier feeds into the Athabasca River and is an important water and energy source for the surrounding region. The waters originating from the Columbia Icefields flow north to the Arctic Ocean, east to Hudson Bay, and south and west to the Pacific Ocean (Parks Canada, 2014).

3.1.2 Polar Bear Viewing in the Churchill Region, Manitoba

Churchill is located in Northern Manitoba along the west shore of Hudson Bay (Figure 6), roughly 70 miles from the Nunavut/Manitoba boundary. Churchill is self-declared as the 'polar bear capital of the world' (Stewart, Dawson, & Lemelin, 2012). The region includes Wapusk National Park, the Town of Churchill and the Churchill Wildlife Management Area (Parks Canada, 2007). The Town of Churchill has a population of 813 and has a total area of 53.96 km² (Statistics Canada, 2015a; Manitoba Health Population Report, 2011). The population in Churchill has declined from 1,304 in 1981 to 813 in 2011 (Statistics Canada, 2015a). The 2011 census reported the employment rate in the Town of Churchill is 64.6% with seven employment industries identified. The top five are: Transportation (140), Health care and social assistance (130), Retail trade (50), Public administration (35), Educational services (20) (Statistics Canada, 2015a). Tourism industry was not an option within the census.

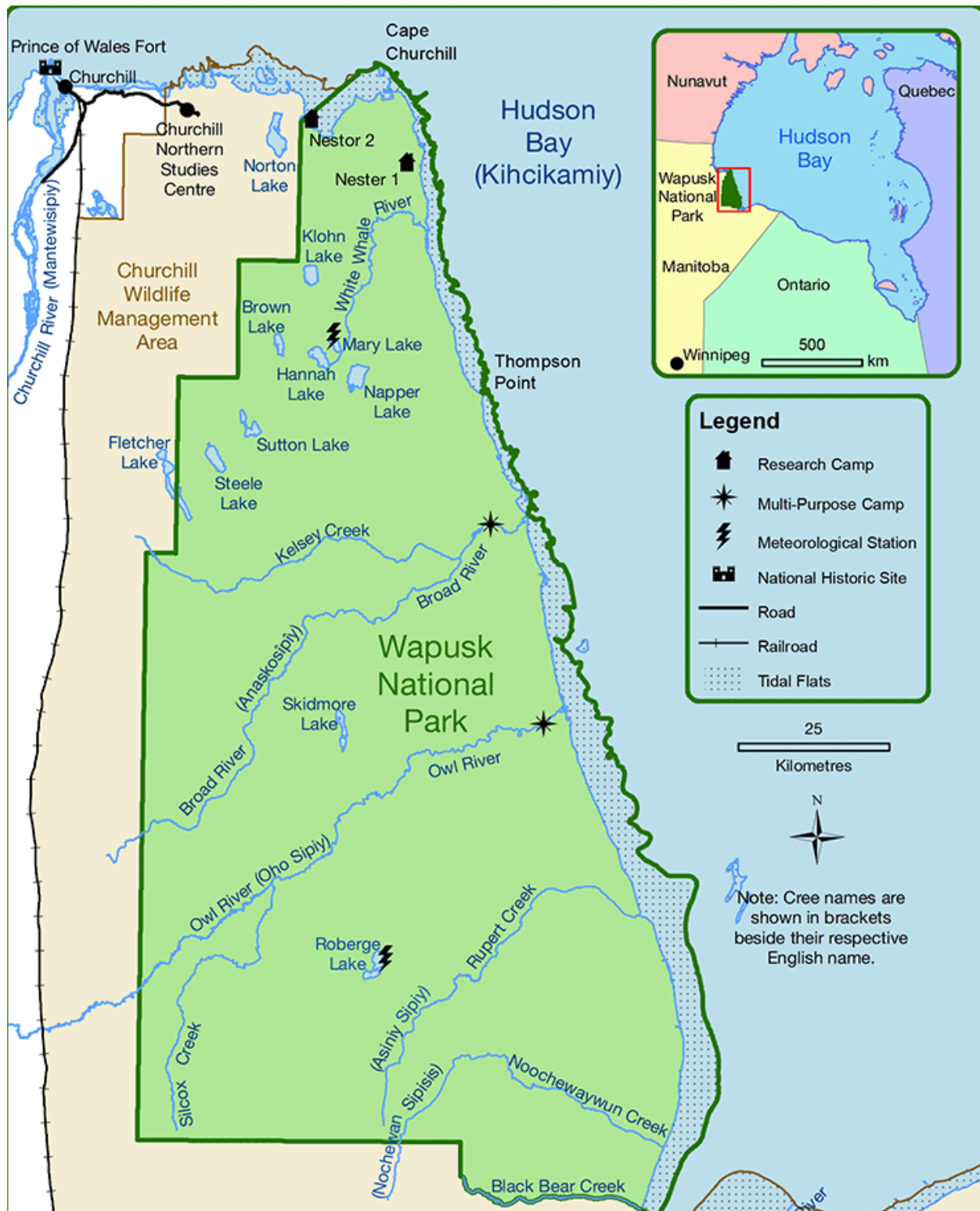


Figure 6. Churchill Manitoba location map (Parks Canada, 2012).

A visitor study by the University of Manitoba and Parks Canada indicated that about 20,000 people visit Churchill annually, coming to view wildlife, learn the local history and to experience the area and culture (Parks Canada, 2007). The report indicated two thirds of visitors took a polar bear viewing tour and almost half came specifically to see a polar bear (Parks Canada, 2007). The Town of Churchill website describes Churchill as, “a world-renowned tourist destination; famous for its polar bears and beluga whales. It is an international birding hotspot, having a rich history with roots dating back before the Fur Trade” (Town of Churchill, 2014).

The Town of Churchill is considered the gateway community to Wapusk National Park (Parks Canada, 2014b). Wapusk National Park is 11,475 km² and is located on the western shores of Hudson Bay in northeast Manitoba and lies in the transition zone between taiga and tundra (Parks Canada, 2007). Wapusk National Park is one of Canada’s newest national parks and was established in 1996. The purpose of the management plan is to “chart the course for protecting the park while providing for visitor use, appreciation, and understanding” (Parks Canada, 2007, p. 2). The management plan directs key activities, including visitor opportunities, partnerships and heritage presentation (Parks Canada, 2007). The plan states “without compromising ecological integrity, opportunities will be developed for visitors to experience the park in safety” (p. vii). The management model for Wapusk features cooperation with communities and encourages management and staff to work in a professional, open and trusting, and respectful manner (Parks Canada, 2007). The plan outlines four management areas: (1) Managing for Ecological Integrity; (2) A Place of Historical and Cultural Significance; (3) Managing for Visitors; and (4) Management Partnerships (Parks Canada, 2007). Currently there are no visitor facilities to support visitor opportunities in Wapusk National Park, but visitors are able to move from the

Town of Churchill through the Churchill Wildlife Management Area into Wapusk National Park.

Of the estimated 20,000 to 25,000 global polar bears, approximately 15,000 reside in Canada, with a southern population congregating near Churchill in the summer months when Hudson Bay is not frozen (Stewart et al., 2012). Churchill has built a reputation of being the best place to view polar bears in their natural habitat. Polar bears congregate along the western shore of Hudson Bay during the summer when the sea ice melts, fasting and waiting for the formation of sea ice (Stewart et al., 2012; Lemelin et al., 2010; Stirling, 1998). Polar bear viewing takes place along the narrow coastal strip east of Churchill in the vicinity of Gordon Point in the Churchill Wildlife Management Area (Stewart et al., 2012). Dawson et al., (2010), state between 6000 and 10,000 polar bear viewing tourists visit Churchill to view polar bears each season, and a reasonable estimate of visitors per season is likely 8000. Polar bear viewing season often varies based on when freezing occurs; the past few years the best time to view the bears is October and November before the bears can get back onto the ice to hunt seals (Travel Manitoba, 2014). Viewing is facilitated by specialized tundra vehicles operated by two companies, Tundra Buggy and Great White Bear, who share licenses to operate 18 vehicles in the Churchill Wildlife Management Area and a select few are able to operate in the park (Stewart et al., 2012; Lemelin et al., 2010).

Climate changes are already affecting polar bear populations within the Hudson Bay area in Canada. Previous reductions in sea ice in this region, occurring between 1988 and 2004, caused the Western Hudson polar bear subpopulation to decline by 22% (Stirling & Parkinson, 2006; Lemelin et al. 2010). Lemelin et al. (2010) state “projections suggest that if the Hudson Bay regional temperature was to increase the

ice-free season by approximately two weeks or more, female polar bears will lose 22 kg of body mass per season” (p. 480). This reduction in body mass would have an immense impact on polar bear reproduction. If climate change continues to cause decreasing reproduction levels among polar bears, the long-term sustainability of wildlife tourism based on polar bears in Churchill will be significantly affected (Lemelin et al., 2010). If polar bears change locations for more favourable feeding and breeding locations, tourism in Churchill will likely have a dramatic change and mobility patterns of visitor flows will likely follow the bears.

3.1.3 Differences between the Case Study sites

Although both the Athabasca Glacier in Jasper National Park, Alberta and Polar Bear Tourism in Churchill Manitoba are examples of LCT destinations, they are very different destinations. Table 3 shows a comparison of the two locations. While both locations cater to an international audience of all ages, the location, geography, population and visitation vary.

Table 3. Comparison of Jasper National Park and Churchill Manitoba

	Athabasca Glacier in Jasper National Park	Polar Bear Tourism in Churchill
Location	South west Alberta, Canada in Jasper National Park	Northern Manitoba, Canada in region of Churchill
Geography	Mountainous region: alpine tundra, glaciers, hot springs, lakes, waterfalls, and mountains.	Subarctic transition zone: coniferous forest, tundra, rivers, estuaries, sand flats, coastal sand dunes and beaches, open sea.
Ecozone	Montane Cordillera ecozone	Hudson Plains ecozone
Nearest Community	Town of Jasper (Within the Park)	Town of Churchill (45km)
Community Size	925.52 km ²	53.96 km ²
Community	5,236	813

Population

Wildlife Management Area	N/A	Churchill Wildlife Management Area (8, 500 km ²)
National Park	Jasper National Park	Wapusk National Park
Park Establishment	1907	1996
Park Size	10,878 km ²	11,475 km ²
Visitor Numbers	Two million people visit Jasper National Park annually	20,000 people visit region of Churchill annually
Attraction Viewing Area	Off Columbia Icefields Parkway (hike up to view glacier or purchase guided tours)	Churchill Wildlife Management Area and Wapusk National Park (guided tours)
Visitor Base	International, all ages	International, all ages
Available activities	In addition to Athabasca glacier tours: hiking, skiing, camping, river rafting, sightseeing, fishing, wildlife viewing, hot springs, etc.	In addition to polar bear viewing tours: beluga whale watching, scuba diving, bird watching, northern lights, arctic research, etc.

Even though both locations are popular wildlife viewing areas, the types of wildlife available to see varies because of the location and geography. Churchill has more marine life such as beluga whales, sea birds and polar bears because of its coastal location on salt water. Jasper National Park has large land animals such as elk, bears and goats. Even access to the main attractions studied in this research is vastly different. In Jasper, the Athabasca Glacier is located within the park and is a stationary attraction open all year, except during winter when the highway is closed. Polar bear viewing typically takes place in the Churchill Wildlife Management area although bears can be seen closer to town and within Wapusk National Park. The polar bears have their usual denning areas, but because they are wild animals they can be seen throughout the region. Tours for the bears typically take place between October and November, although they and other animals can be seen year round.

The case study locations and attractions studied in this research are very different, but both destinations represent a fragile environment highly affected by climate change. They are both LCT destinations and therefore have been chosen as the study sites for this research.

3.2 Research Design

3.2.1 Theoretical Perspective

Qualitative research is often grounded in a theoretical perspective, although this research is mixed methods, a theoretical perspective is still needed to guide analysis. This research is grounded in an interpretive paradigm, which attempts to get an 'insider's perspective' (Derham, 2011; Jennings, 2001). An interpretive approach sees people and their interpretations, perceptions, meanings and understandings as the primary data source. Total immersion in a setting is not necessary with interpretivism. Jennings (2010) states interpretivism is "a paradigm in which it is assumed that reality can be interpreted in various ways and that knowledge and understanding are dependent on context and individual experience" (p. 84). This approach allows the researcher to understand the world from an insider's perspective and is subject to multiple explanations and realities (Jennings, 2010).

3.2.2 Mixed Method Approach

The idea of mixing methods integrates quantitative and qualitative data. Mixed methods can use the results from one method to help identify participants or questions to ask for the other method. The qualitative and quantitative data can be merged into one large database or the results used to reinforce each other (Creswell, 2009). Creswell (2009) defines mixed methods research as "a step forward, utilizing the strengths of both qualitative and quantitative research...the problems addressed

by social science researchers are complex and the use of either quantitative or qualitative approaches by themselves is inadequate to address this complexity” (p. 203). Research using mixed methods builds a complex, holistic picture, and reports detailed views of informants (Creswell, 2009). Mixing methods also allows for method triangulation which paves the way for more credible and dependable information (Decrop, 1999).

There are three different types of mixed methods strategies described by Creswell (2009) (1) Sequential mixed methods; (2) Concurrent mixed methods; (3) Transformative mixed methods. Sequential mixed methods aim to elaborate or expand on the findings of one method with another method. To start, qualitative interviews may be used for exploratory purposes and follow up with quantitative methods so results can be generalizable. Concurrent mixed methods procedures merge quantitative and qualitative data in order to provide a comprehensive analysis of the research problem. Transformative mixed methods procedures use a theoretical lens as an overarching perspective within a design that contains both quantitative and qualitative methods. Creswell (2009) states within transformative mixed methods data collection can involve sequential or concurrent approach.

A sequential mixed method case study approach with an interpretivist theoretical lens was selected as the most appropriate method for this research study in order to meet the objectives and answer the research questions. The results of this study are reinforced because of the qualitative and quantitative methods used.

Qualitative approach allows for rich information to be collected, information which is difficult to obtain through standard quantitative measures (Derham, 2011). Qualitative approach is more flexible which allows the researcher to be creative and

provide in-depth detailed analysis when discussing the research findings (Jennings, 2010). This is needed in this study to understand how stakeholders are marketing and preparing the destination with respect to climate change.

Quantitative approach has the ability to collect a variety of data such as performance data, observational data, and attitude data (Creswell, 2009). The data is often collected on an instrument that measures attitudes and the information is analyzed using statistical procedures (Creswell, 2009). This form of data collection is needed in this study to measure stakeholder attitudes towards climate change.

3.2.3 Case Study Approach

Qualitative research methods involve the systematic collection, organization, and interpretation of textual material derived from talk or observation (Malterud, 2001). There are several different options to choose from for conducting qualitative research, for instance Wolcott (2001) identifies 19 strategies and many researchers outline complete procedures on specific qualitative inquiry approaches. Creswell (2009) outlines five of the most commonly used qualitative research method options:

- Ethnography is a strategy of inquiry in which the researcher studies an intact cultural group in a natural setting over a prolonged period of time by collecting, primarily, observational and interview data.
- Grounded theory is a strategy of inquiry in which the researcher derives a general, abstract theory of a process, action, or interaction grounded in the views of participants. This process involves using multiple stages of data collection and the refinement and interrelationship of categories of information.
- Case studies are a strategy of inquiry in which the researcher explores in depth a program, event, activity, process, or one or more individuals. Cases are bound

by time and activity, and researchers collect detailed information using a variety of data collection procedures over a sustained period of time.

- Phenomenological research is a strategy of inquiry in which the researcher identifies the essence of human experiences about a phenomenon as described by participants. In this process the researcher brackets or sets aside his or her own experiences in order to understand those of the participants in the study.
- Narrative research is a strategy of inquiry in which the researcher studies the lives of individuals and asks one or more individuals to provide stories about their lives. This information is then often retold or re-storied by the researcher into a narrative chronology. (p. 13)

All these methods have proven merit but there were two methods that would achieve the desired outcome and meet the objectives considered for this research: case study and narrative research. The other types of methods were not considered because time was limited and the researcher was not able to go to both sites for an extended period of time. For example, methods such as ethnography or phenomenological research require a researcher to dig deep into social institutions and human experiences, time and funding constraints did not allow for this. Narrative research would allow the stakeholders of this study to share their stories and may have created a whole new narrative surrounding destinations labelled as LCT. Narrative research was not chosen as the most appropriate to answer the research questions and supply results that would be able to confirm or dispute findings from previous research on the topic. Case study methods is characterized by using several different types of collection methods to achieve results. In the end, case study methods were chosen as the most appropriate for achieving the objectives and answering the research questions. Case study methods with a mixed method sequential design allowed the

researcher to complement the qualitative data with quantitative data filling in any missing data with a second method, enriching the results.

Case studies are empirical inquiries that investigate contemporary phenomena in depth and within a real-world context (Yin, 2014, p. 16). This approach allows the investigator the opportunity to provide interpretation of real life events, including organizational and management processes (Derham, 2011).

The research is considered both descriptive and exploratory in nature; it aims to describe how stakeholders regard their destinations interaction with climate change as well as what actions they plan on taking in the future. This research contributes to the emerging LCT literature. Using the previous studies on stakeholder perceptions of LCT (Olsen et al., 2012; Wilson et al., 2014) as a guide, this study adds a business and marketing dimension of what has already been reported. By also concentrating on stakeholder future business adaptations, this research will add to the growing literature of LCT, adaptive capacity and the business of tourism.

Every type of case study design includes a desire to analyze contextual conditions in relation to the “case” (Yin, 2014). Figure 7 was adapted from Yin (2014) and shows the basic type of design for a single case study with multiple units of analysis which will be used in this study. The context for this study is that LCT is a controversial new phenomenon that is suspected as being used to market and promote destinations. LCT has an inherent paradox because promoting LCT destinations often leads to increased visitation which may require long haul air travel, contributing to climate change impacts at the destination (Dawson et al., 2010). The case is marketing LCT destinations and there are two embedded units of analyses which are the case study sites, the Athabasca Glacier at Jasper National Park and Polar Bear Tourism at

Churchill Manitoba. Yin (2014) says the dotted lines represent information moving freely and that the boundaries between each box are not sharply defined.

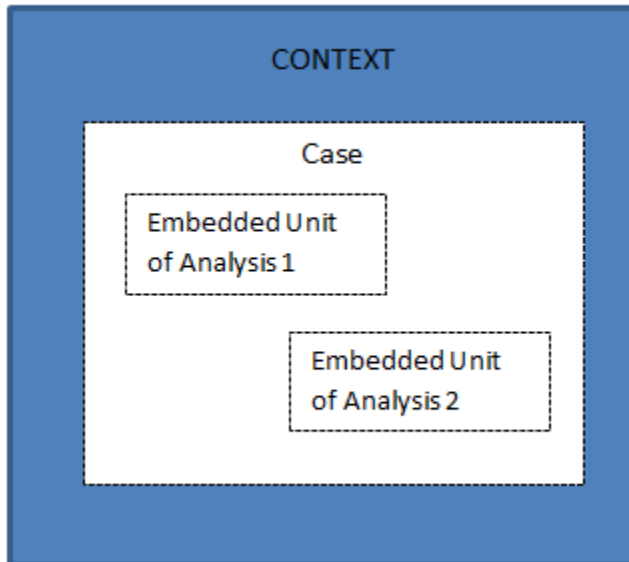


Figure 7. Design of Case Study

Yin (2014), states there are five component of a case study research design:

1. A case study's questions;
2. Its propositions;
3. Its unit(s) of analysis;
4. The logic linking the data to the propositions; and,
5. The criteria for interpreting the findings.

Yin (2014) states the study questions are important for choosing the most relevant research method. This research explores how and why stakeholders use LCT in marketing destinations. The research questions help to narrow what will be covered during data collection and assist in confirming past research findings.

The propositions are the research objectives; each proposition directs attention to a topic that was examined within the scope of the study: climate change, marketing and adaptations. These propositions helped the research to be focused and stay in the right direction.

The unit of analysis is related to the fundamental problem of defining the case to be studied, for this research the case is marketing LCT (Yin, 2014). For this component there are two steps: defining the case and bounding the case (Yin, 2014). Often case study research involves researching individuals, but for this study LCT the phenomenon is being studied. The destinations and tourism at these destinations (Glacier Tourism in Jasper National Park and Polar Bear Tourism in Churchill, Manitoba) are the units of analysis. Bounding the case involves defining stakeholders, this ensures this case study is distinguished from previous research and will help to determine the scope of the data collection (Yin, 2014).

Stakeholders can be defined as any person, group or organization that can affect or be affected by an attraction (tourism operators/businesses, tourism industry associations, and governments/communities) to fulfill their own goals (Scott et al. 2009). The stakeholders for this research project are characterized as businesses or organizations involved in tourism that would be influenced by climate change in the area. For this study, stakeholders are businesses or organizations that operate tourism, education, or environmental protection programs for the Athabasca Glacier or Polar Bear tourism. Stakeholders do not have to operate solely within the case study sites Jasper National Park or Churchill, Manitoba. For example stakeholders from Banff, Canmore, and Hinton were included as Jasper stakeholders. Additionally, many stakeholders who operate polar bear tourism businesses were based outside of

Churchill. Tourists and visitors, community members who did not operate a tourism business and political figures were not included as stakeholders.

The logic linking the data to the propositions foreshadows the data analysis of the case study (Yin, 2014). This study uses computer software QSR Nvivo 10 to analyse the data. An interpretive approach is used during analysis and is detailed in the following sections. The objectives and research questions guided the analysis, but there was room for themes to emerge from the data.

The previous studies used to guide this research and literature on the topics of climate change, adaptations, and marketing represent the criteria for interpreting the findings. Yin (2014) states previous research on the subject can be used to confirm or dispute the findings. Using previous research will not only ensure the findings will be reinforced but also contributes to the broader LCT literature.

3.3 Data Collection

Sample methods were purposeful in nature. In qualitative research, it is ideal to purposefully select contacts that will best help the researcher understand the research questions (Creswell, 2009). The sample size was dependent on resources and time available (Jamal & Hollinshead, 2001). Often, purposive sampling is most successful when data review and analysis are done in conjunction with data collection. A contact list was originally developed through an exhaustive internet search of stakeholders at each destination. This contact list was added to throughout the study to allow potential participants flexibility. All the potential participants work in the tourism industry, each destination is highly seasonal, therefore flexibility was imperative.

3.3.1 Interview Collection

Stakeholder semi structured telephone interviews were conducted by two researchers. The first set of interviews was conducted from July 28, 2014 to August 22, 2014 by Melissa Weber. The second set of interviews was conducted from October 1, 2014 to November 1, 2014 by Bobbie Swartman. A third set of interviews were conducted from February 1, 2015 to March 6, 2015 by Bobbie Swartman. First, participants were contacted via email with an email script (Appendix A/B). A formal recruitment letter (Appendix C/D) and informed consent form (Appendix E) were attached to the initial emails. In addition to emails, potential participants were called by telephone and invited to participate; this allowed for more information to be provided to potential participants as well it was more convenient for researchers to schedule interviews with potential participants. If respondents indicated interest via email, they were sent the interview script (Appendix F/G), and a time for the telephone interview would be set. If participants wanted to participate, but were not available for interviews, they were given the option to complete a survey format of the interview. Follow up emails were sent to individuals who were completing surveys as a reminder of participation deadlines.

Table 4 summarizes the types of questions asked during interviews. There were seven categories for the Jasper National Park interviews with a future implications section which asked participants their impressions of Figure 8. For the Churchill interviews the future implications section did not apply and was not included.

Table 4. Summary of questions asked during semi structured interviews

Section topic	Description of questions asked
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Section A: Respondent Information & Organizational Background	This section asked demographic questions; what is participants' business market focus, employment base, length of operation, range of visitor experiences, and how long participants have worked in the industry.
Section B: Importance of the Athabasca Glacier/ Polar Bears	Participants were asked what the significance of the glacier/polar bears as an attraction (visitor attraction, economic resource, and educational resource). They were also asked what the glacier/polar bears mean to them and if their business is dependent on the attraction.
Section C: Visitor Experiences: Motive, Expectations, Satisfaction	In this section Participants were asked about visitor motivations, expectations and satisfaction. They were also asked if they have strategies to market the attraction to visitors and what they think Frommer's "500 Places to See Before They Disappear" influence on visitation is.
Section D: Environmental Context: Climate Change	Participants were asked about changes they have seen over time at the glacier or of the polar bears (extent, aesthetics, surrounding conditions). They were also asked if they think climate change has implications for their business (access, visitor safety, and marketing) as well if the changing nature of the area will expose their business to risks.
Section E: Adaptive Strategies	Participants were asked of actions/ strategies they have undertaken to deal with climate change. They were also asked about Jasper National or Wapusk National Parks Managers influence on their and other organizations. As well they were asked about adaptations they anticipate in the future.
Section F: Future Implications (Jasper National Park only)	Participants were shown photo scenario (Figure 8) comparing the glacier today to the year 2050 and asked if they think tourists will still visit the area.
Section G: Other Information	Participants were asked to rate their concern of climate change both personally and for their business. They were also asked when they think climate change will be an issue for their business.



Figure 8. Current state of Athabasca Glacier vs. projected future in 2050

3.3.2 Website Image Collection

In addition to interviews, a website analysis of brand imagery was undertaken. Brand imagery contributes to the perceptions, expectations and ultimately satisfaction of potential visitors of destinations (Cai et al., 2009). The internet has drastically transformed branding in the tourism industry, the distribution and marketing of tourism products is a lot more accessible to potential travellers (Choi, Lehto & Morrison, 2007). Therefore, a list of tour operators, tour guides, and tour outfitters was created by an internet search. To do so a Google key word search was undertaken. Key words or phrases searched for Jasper National Park were:

- “Athabasca Glacier”
- “Athabasca Glacier Tourism”
- “Athabasca Glacier Tours”
- “Jasper Glaciers”
- “Friends of Jasper National Park”
- “Columbia Ice Fields”

- “Tour operators in Jasper”

Key words or phrases search for Churchill were:

- “Churchill Manitoba tour operators”
- “Polar bear tourism Canada”
- “Polar bear tours”

To account for time and resources, 20 websites from each destination were purposefully chosen to examine. A total of 21 websites were recorded from the Jasper search, one website was repeated therefore it was only counted once.

For the Churchill search, the website “everythingchurchill.com” supplied a list of tour operators, many of those on that list were chosen since visitors would likely see their websites first. There were a total of 21 websites recorded from the Churchill search, one was a repeat and also removed.

The website imagery analysis used quantitative content analysis methods with an interpretive lens to understand how the chosen stakeholders use images in brand marketing.

3.4 Data Analysis

3.4.1 Interview Data Analysis

There are many different approaches to qualitative data analysis. Mason (1996) outlines three approaches; literal, interpretive and reflexive. The literal approach focuses on the exact use of particular language or grammatical structure used. Interpretive is concerned with making sense of the research participant’s accounts; the researcher is attempting to interpret meanings (Welsh, 2002). Reflexive analysis focuses attention on the researcher and their contribution to the data creation and

analysis process. As previously stated this research uses an interpretive approach to analyse the data, this will allow for participant meaning to easily emerge.

The data analysis computer software QSR Nvivo 10 was used to analyse the interview data. Some researchers express concern that software may guide researchers in a particular direction during analysis (Welsh, 2002). Others believe using computer software can serve to distance the research from the data and encourage quantitative analysis of qualitative data, creating homogeneity in methods across social science. The use of QSR Nvivo 10 software can aid in making research more reliable and robust, enhancing transparency (Crowley, Harre & Tagg, 2011; Welsh 2002). QSR Nvivo 10 was used because of the benefits provided to time and resource constraints as well as easily providing both quantitative and qualitative results from the data.

The first step in the data analysis process was to prepare the interview documents. The interviews were not recorded, but detailed notes were taken by interviewers. Each interview was then formatted to be consistent as possible. Once formatted, the documents were transferred to the QSR Nvivo 10 software. Each group of interviews (i.e. Jasper or Churchill) was then coded using auto coding option in the program. This allowed the data to be grouped into nodes using the research questions as titles. This step was useful in developing quantitative results.

A second set of formatted interview documents was uploaded into the program to allow for interpretive qualitative analysis to be completed. This interpretive analysis used open coding of the interviews to create nodes from sections of texts. Strauss and Corbin (1990) defined two types of coding: opening and axial. Opening coding is done first, the data is swept through and sections or ideas in the text are then coded into nodes using the software. Then axial coding is used to sort the nodes into order,

grouping them into themes (Learning Domain, 2002). Glaser and Holton (2004) describe the process of opening coding; it begins with line by line coding to identify substantive codes emerging from the data. The analyst begins coding, focusing on patterns, coding into as many categories or nodes as possible. New categories constantly emerge and new incidents fit into existing categories. Khandkar (n.d.) states the goal is to build a descriptive, multi-dimensional preliminary framework for later analysis.

The interviews groups (i.e. Jasper and Churchill) were coded as one, site specific themes such as discussion of glaciers or polar bears were coded into separate nodes. Themes began to emerge during open coding so the nodes were grouped as much as possible to assist in the axial coding process. If a topic did not fit into an existing node, a new node was created. Once all the interviews were coded, analysis of the nodes began, looking for emerging themes and similarities and differences in the data. There were several common themes that emerged as well as site specific themes.

3.4.2 Website Image Analysis

Photographs are vital to successfully create and communicate a destination's brand image (Mackay & Couldwell, 2004). The most common approach to evaluating visual images has been content analysis (Timothy, 2001). Although, the content analysis is quantitative in nature, the researcher used an interpretivist lens while developing categories for classification.

Table 5. Review of categories used in image analysis studies

	Choi, Lehto & Morrison (2007)	Dadgostar & Isotalo (1996)	Fakeye & Crompton (1991)
1.	Historic building and heritage	Hotel accommodations	Social opportunities and Attractions

2.	Cultural events and facilities	Restaurant facilities	Natural and Cultural Amenities
3.	Parks and garden	Shopping variety	Accommodations and Transportation
4.	Shopping	Visits with family/friends	Infrastructure, Foods and Friendly people
5.	Tourism facilities and infrastructure	Opportunities to do things with children	Bars and Evening Entertainment
6.	Entertainment and gaming	Parks and other interest sites	
7.	Birds eye or natural views	Opportunities for rest and relaxation	
8.	Local cuisine and dining	Nightlife activities	
9.	Sports/recreation activities, facilities and festivals	Cultural events	
10.	People and local residents	Opportunities for skiing	
11.	others	Availability of summer sport facilities	

Table 5 presents three studies that used content analysis on destination images. The studies varied in purpose, and method (e.g. quantitative vs. qualitative) and category development.

Choi et al. (2007) developed their 11 categories based on the results of a preliminary textual data analysis as well as using other research examining visual information as a resource. Dadgostar and Isotalo (1996) selected attributes to measure city destination image based on the major leisure motives of relaxation, diversion and social participation. After a review of the literature, Dadgostar and Isotalo (1996) formed the 11 variables were considered as factors contributing to the formation of a city destination image. Fakeye and Crompton (1991) used factor analysis to generate five factors to apply to their study of image differences between prospective, first time and repeat visitors to the lower Rio Grande Valley.

Because literature on LCT destinations, climate change and marketing have rarely intersect, the categories for this study were developed as analysis was being done. This ensures images were categorized into site specific categories, remaining relevant and in context to the destination brand.

There were several parameters created to ensure consistency during image categorization. Some websites had multiple pages; each page that was on the menu of the main home page was explored. Some websites had links to other websites or resources; these were not looked at during analysis. If there was an image that was repeated on a website, it was not double counted, but if that same image appeared on a different website it was counted. For the Jasper websites, if a Brewster's Ice Explorer was in the photo, even if the glacier was also in the photo, it was counted in the vehicle category. For Churchill, if a Tundra Buggy was in the photo as the main focus, it was counted in the vehicle category. Researcher discretion was used while categorizing, and notes were taken in order to maintain consistency and provide rationale.

3.5 Ethical Considerations

My role as a researcher was to ensure all participants felt safe during interviews and remained anonymous. Each participant received a letter of introduction, once interested they also received an informed consent form and the interview script to prepare them for the interview. This study was reviewed and received ethics clearance through the Office of Research Services at Wilfrid Laurier University in Ontario.

Chapter Four: Results

The research questions were used to guide the results. First, results that were deemed important to present because they relate to the broader LCT and tourism literature are discussed then the results answering the research questions are presented.

4.1 Stakeholder Interviews: Jasper National Park

4.1.1 Response Rates and Stakeholder Demographics

The response rate for Jasper was 47.6%, with 21 people contacted and 10 participating. There were two surveys returned for Jasper and eight interviews conducted.

There were three participants who identified as interpretive guides or association of guides, one wilderness conservation organization and six participants identified as tourism providers. Participants gave a variety of responses when asked about employment base, six participants said their employment base was Canadians, one was a single guider, one answered local workforce and seasonal workforce, and two did not answer the question.

The average length the businesses have been in operation is 27.8 years. Parks Canada was taken out of that calculation, as it would have skewed the data since it has been established for over 100 years.

There were again a variety of experiences offered by respondents but the most common involved wilderness experiences. There were five participants that said they offered some sort of guided tour, one participant taught guides, one was an advocacy group with no visitor experiences offered, and three did not answer the question.

4.1.2 Significance of the Athabasca Glacier

All but one of the participants agreed the glacier is one of the top attractions of the mountain parks. The participant that disagreed only suggested the glacier is not specifically important to their business specifically, but it still brings visitors into the area. One visitor explained the significance of the glacier by stating:

Visitors to national parks often indicate they visit the parks to see and experience the pristine wilderness and beauty. The glaciers and the Athabasca glacier, are probably a big part of the draw to the Rocky Mountain parks in general. – JNP07

Participants suggested the glacier is a major draw in Jasper, the top tourism attraction, but it is also its location that plays an important role. One participant explained “It is located on the most beautiful road in the world” – JNP03. One participant elaborated on the importance of the glacier stating “Very important, get 2 million visitors to jasper 350,000 visit the glacier or go by it, a little less than ¼ of visitors experience it in some way” – JNP10.

The economic importance of the glacier was debated by some. Most participants suggested it is a huge impact for the businesses that operate at the glacier or for the guides. But two suggested it is hard or near impossible to know the economic impact the glacier has. It may be the main draw on the Parkway through Jasper, but participants suggested only one business (Brewster) gets the most of the profits. One participant explained:

Strong suspicion a lot of people come from Banff up to the southern tip of Jasper only, to the icefields. Not sure of the impact economically – they will do

one of three things: Brewster bus, ice walk, or just walk up themselves. Biggest economic impact would be for the buses. – JNP09

All of the participants agreed that the glacier is incredibly important as an educational resource, and it is a valuable tool in climate change education.

Only two participants indicated their business was dependent on the glacier. Five said they were not dependent and the question was not asked of three participants.

When asked if the Athabasca Glacier was a primary attraction or the main draw for visitors, four said yes, one said they did not know, and one said no. The question was not asked of four participants. One of the participants who said yes elaborated that it is only a primary attraction for a certain segment, explaining “Major draw yes, for a portion of the population – primary attraction” – JNP02.

4.1.3 Visitor Motivations and Satisfaction in Jasper National Park

Participants supplied a variety of reasons for why people visit Jasper National Park and the glacier, but for the most part the theme revolved around wilderness experiences. Several participants have conducted research on visitors’ motivations:

“Based on research we know that the majority of the visitors come to Jasper to experience the pristine wilderness in the park and partake in recreational activities” – JNP07.

“A lot of surveys done on this. Number one draw in all mountain National Parks is wildlife and scenery. People like to see wild landscapes and wildlife” – JNP05.

“We have done research on this – four main reasons – open space, wildlife, landscape, and activities” – JNP02.

When asked what participants think visitors’ main motivation is, all stated wilderness. One participant says “Fundamental difference between Banff and Jasper is the expansiveness and wildness of Jasper” – JNP09.

Six participants said visitors are satisfied with their glacier experience, but some said it depends on what the visitor does. Three said they are unsure, and one participant did not answer the question. One participant explained visitor satisfaction stating “Visitors satisfied to reach ice – Brewster ride or icewalks, those folks on ice walk very satisfied. Most people on ice explorer find it fun to be on the middle of the glacier” – JNP05. Another participant described that while visitors are satisfied, some express disappointment in the development of the area, “Overall, many people or groups always say it was a great experience. A lot of comments, almost disappointed in the level of development going on” – JNP06.

4.1.4 What marketing strategies are stakeholders employing?

Overall, results indicated participants have limited marketing strategies. When asked if their business or organization has a certain strategy in marketing the glacier three said yes, four said no, one participant did not reply, and the question was not asked of two participants.

These results indicate a lack of marketing strategy and promotion, one participant specifically stated they do not wish to advertise a lot explaining “We don’t spend a lot on advertising, not looking to be as big as Brewster, wouldn’t be able to provide the same experience” – JNP09. The glacier is located beside the road from

Jasper to Banff, so everyone who uses this road sees the glacier. One participant stated “People make their way from Banff to Jasper or Jasper to Banff, and the Athabasca Glacier is the main attraction between that zone” – JNP02. The location of the glacier may be the reason participants do not have a marketing strategy for promoting glacier tourism. Two participants indicated the glacier itself has no importance to their company specifically, but it is significant for the region. One stated “It’s too far away for my tours but it bring in tourists from all over the world”- JNP01. The other participant suggested the glacier is only important for one company that operates at the foot of the glacier. But, the whole area is important because they take clients to the area. Another participant suggested the glacier is important for the region because of the impacts it has on the environment, they stated:

In every single activity it comes back to conversations of the glacier and Columbia Icefields. Such an iconic topic of conversation...one of the top question we are asked is ‘why is the river murky’ which opens up glaciology, climate change, and freshwater topics. – JNP02

Future changes to marketing

Participants were asked to discuss potential future changes to marketing techniques caused by climate change. One participant suggested marketing methods will change as the destination changes, “Emphasis will change to whatever’s [needed] to make up for shortfall... might have to find other things to promote” – JNP05.

Participants indicated the loss of the glacier would cause the biggest change in marketing because there would be no tours on the glacier. Therefore, marketing efforts would have to focus on a new attraction. Although, one participant did not believe the glacier will be gone in their lifetime, they did suggest other options should be

considered. Many participants discussed the Skywalk as a replacement, suggesting Parks Canada and Brewster are already preparing a new attraction for the future. They state “The Skywalk – main purpose, intention is tramway which would be highly marketed...tramway – lucrative and less cost per person” – JNP05, they continue suggesting the skywalk-tramway would likely be promoted heavily and provide a different tourism experience.

Two participants suggested they had considered using LCT slogans as a marketing tool, they explained the glacier is a good candidate, indicating their business had already been impacted by climate change and honestly believing people should see the beauty of the glacier before it is gone.

Website image analysis findings: Jasper National Park

Table 6 provides links and shows the list of websites used for the Jasper National Parks image analysis.

Table 6. List of websites: Jasper National Park

	Website Name	Link
1	Viator	http://www.viator.com
2	Parks Canada Website	http://www.pc.gc.ca/eng/pn-np/ab/jasper/
3	Brewster Travel Canada	http://www.brewster.ca
4	Ice walks travel operator	http://www.icewalks.com/
5	Trip advisor – Athabasca Glacier	http://www.tripadvisor.ca
6	Earth sciences Canada	http://www.earthsciencescanada.com
7	Banff and beyond	http://banffandbeyond.com /
8	Banff & Lake louise	http://www.banfflakelouise.com
9	Travel Alberta	http://travelalberta.comx
10	Jasper Adventure Centre	http://www.jasperadventurecentre.com

11	Friends of Jasper	http://www.friendsofjasper.com/
12	Jasper Travel	http://www.jasper.travel
13	Jasper National Park	http://www.jaspernationalpark.com/
14	Discover jasper	http://www.discoverjasper.com /
15	Sun dog tours	http://www.sundogtours.com/
16	Jasper Rafting	http://www.jasperrafting.com/
17	Walks and talks jasper	http://www.walksntalks.com/
18	Helicopter tours	http://www.hcheli.com/
19	Canadian rockies Adventure centre	http://canadianrockies.ca/Athabasca/Ice/Walks
20	Peter Amann mountain guiding and schools	http://www.incentre.net/users/pamann/

Upon completing the analysis of Jasper stakeholder websites, 44 categories were developed and 596 images were analyzed (Figure 9). Categories were then edited further into more thematic categories. For example, during analysis images of the Athabasca Glacier were divided into six sub categories (images taken from road, from the trail, on the glacier etc.). This was deemed redundant and the six categories were merged into one. The final count of categories in Jasper is 18.

There were 162 images of the Athabasca Glacier tallied. The next three largest categories of images were wildlife (69), water activities (55), and Brewster ice coach (44). The categories with the least amount of photos were photographers and film crews (1), train tours (6), and skywalk (7).

Findings show images of the glacier was the main focus for a lot of websites. This indicates stakeholders use the images of the glacier to attract visitors. The ability to upload photos from trips may influence potential visitors and become a part of the visitor experience.

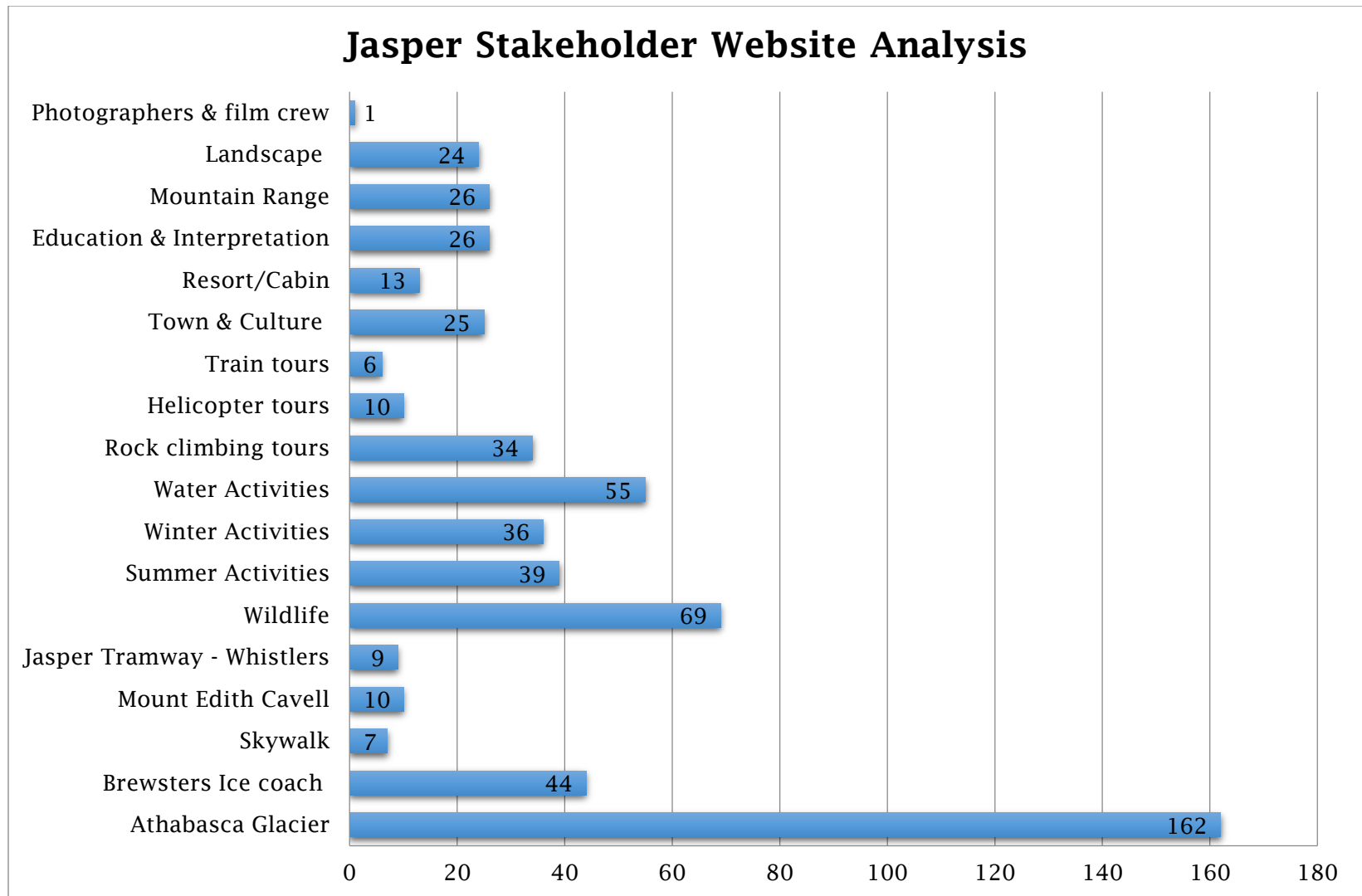


Figure 9. Jasper National Park stakeholder website analysis

4.1.5 Do Stakeholders take advantage of the Last Chance Tourism phenomenon for economic gain?

Results indicated stakeholders are not using the LCT phenomenon for economic gain. Overall, participants agreed the media has a huge influence on visitor expectations, visitation, and in some cases motivation. There is no agreement from participants from Jasper National Park on whether LCT tactics are positive or negative, but some participants suggested the glacier is a good candidate for LCT.

Visitor expectations and media influence in Jasper National Park

When asked if participants have expectations before visiting the glacier seven said yes, one said no, and the question was not asked of four participants. One participant discussed visitors' expectations stating, "Expect to come here and connect with nature but in their own way, in their own ability" - JNP10. When asked how these expectations are formed, participants indicated advertising, pictures and the internet as tools that form visitors' expectations. One participant stated "Individuals, blogs, suggestions, Trip Advisor - forms biggest reach" - JNP03. Another participant said the area is iconic and already well known, "Canadian Rockies are well known and publicized, people have seen stories and pictures of the Rockies, so they want to come and see it for themselves" - JNP09.

Overall, participants believed the glacier is not accurately portrayed in current media. Five said it was not accurately portrayed, three said yes, and two were unsure. One participant who said yes stated "In general yes, Brewster goes on about ice age experience, but that's kind of what you do get" - JNP09. Others that do not think it is accurately portrayed stated:

“No, it’s marketed as a spectacular vista without letting people know this is kind of last chance tourism” – JNP10.

Brewster – size of icefield, [they] haven’t changed numbers in 10 years (300 meters thick is what is promoted). Untrue facts, the depth of the glacier is no longer the size of the Eifel tower, we don’t know how deep it is. – JNP08

“No, information is typically not terribly correct, outdated information on size of glacier, using [numbers] of icefield and length that date back to glacial maximum” – JNP05.

Many participants did not know of the Frommer’s list of endangered destination or hadn’t seen it, so they did not know of its influence. Although, those who did comment said these types of lists serve to reinforce LCT, one stated “Fear Factor – disappearing but false understanding” – JNP02. Another participants stated the glacier becomes a “bucket list item” and another says it influences visitation people may think “Oh it’s going to be gone – we better go see it” – JNP05. Two participants said they had not seen the lists, but say the glacier is probably a good candidate because it is disappearing.

Two participants said these lists influence visitation and pique curiosity, some participants even said they use these types of lists when deciding where to travel. One participant discussed this phenomena, explaining:

Once listed in those bucket list things, there is an increase in visitation to the area and a lot of research shows that. Getting people to see these areas can be positive but what view of nature is the problem – what kind of image are we portraying, wild image or theme park. – JNP06

Two participants discussed how LCT may not be so negative; one said “I’ve been to meetings where we discuss last chance tourism and it’s growing and influential. Glacier would count as last chance tourism, especially with it receding as quickly as it is” – JNP10. The participants agreed the glacier is receding, getting people motivated to visit, even if it is using last chance tourism tactics, may motivate people to get involved in climate change mitigation and adaptation.

4.1.6 Have stakeholders made adaptations to deal with climate change impacts?

Several stakeholders described adaptations that have been completed in Jasper National Park. Five participants said they had already adopted strategies or actions to deal with the retreat of the glacier. One participant described adaptations they already had to make saying, “4-5 years ago there was a huge retreat, left a creek in front of the glacier, looked for a time access was blocked. We used boards as portable bridges” – JNP09. Two participants said they had not adopted strategies, one was unsure, one did not answer the question, and the question was not asked of one participant.

Only two businesses described business actions they have implemented, one saying “Monitoring idling down to a minimum. We have a new computer program – pull up any vehicle and see if idling or turned off” – JNP02.

Others described types of actions, one participant stating “Main action is to warn people of danger of ice experience ride, good science shows the risk” – JNP05. The other stated “We [lobby] for area of Columbia Icefield – limiting development, [we] were against the skywalk” – JNP06.

New developments

A common theme that emerged from the data was the development of new programs or attractions to give visitors options. The new developments have received both negative and positive responses from the stakeholders.

The recent development of the Glacier Skywalk has been debated amongst stakeholders and community members. Two participants said the Skywalk was built in preparation for the retreat of the glacier, one participant explained “[They] built the Skywalk because they know in the long term they won’t be able to operate snow coaches...sooner or later it is not going to work anymore” – JNP05. Another participant furthers this point:

Skywalk, [people question] why they built it, [and the] unspoken reason is they know there will be no glacier there at some point in the future. Quite controversial with the locals – TripAdvisor has mixed reviews. But it seems better for goats because people in confined area, not chasing after them. – JNP09

Others disapprove of the new development stating, “Before the Skywalk [there was a] pull out, what ever you could see from the pull out, you can see from the skywalk” – JNP04; “You see less from the Skywalk than from the road pull off. Skywalk is below elevation viewpoint, which makes a difference in seeing the glacier, very misleading” – JNP05.

Others criticized Parks Canada for allowing the development, “[I] question how much effort when into the environmental impact assessment for the Skywalk. There was a great view without it, but it became more exciting thing to do, one more

adventure activity” – JNP06. Another participant suggested Parks Canada is not protecting the environment by allowing Brewster to build the Skywalk. They say, “They allowed Brewster to put the Skywalk in, which shows they are not doing a whole heck of a lot for the environment out there and ecological integrity is not a primary goal” – JNP03.

The building of the Skywalk resulted in backlash against Parks Canada and their response to climate change. A few participants brought up that Parks Canada had put up signs at the glacier talking about climate change effects, discouraging visitors from going on to the glacier, as well as maintaining the trail to the toe of the glacier. Three participants explicitly stated Parks Canada has not done anything, one saying “None, I worked at Parks Canada for 33 years, I’m sure the answer is none, other than let Brewster build other things” – JNP04. The other says “Not so much, just seems to be more development” – JNP06.

Influencing other business’ adaptations

In Jasper, four participants said they were not aware of any other business’ adaptations. Other participants mentioned conservation organizations are against development in the area. One participant said Parks Canada influenced Brewster to move their bus staging area, stating “Parks Canada influenced Brewster to change staging area, as a result of instabilities on lateral moraine, [now visitors] get in ice explorers lower down and drive up glacier” – JNP09. Another participant says Parks Canada created policies and strategies that influenced other businesses working at the glacier. Most of these policies and strategies concentrated on Brewster such as bathroom sewage being properly disposed of, and the ice explorer staging area.

4.1.7 Are stakeholders prepared to make adaptations necessary to deal with climate induced impacts?

Many participants believed they would adapt to climate changes when necessary as they have in the past. One participant suggested they will be flexible and change or adapt with what climate change offers them. They described climate change as a natural process which they will adapt to as changes occur “We will be flexible and change with what climate change offers us - it’s a natural process” - JNP01.

Two participants suggested recreation opportunities or attractions will be promoted or built away from the glacier. One participant stated, “Once melting proceeds to point of lake might see Brewster and other organizations put boats on the lake, tramway to Wilcox pass or above icefield center”- JNP05. This participant is discussing the picture shown to them Figure 8. If the glacier recedes enough, a lake may be formed where the foot of the glacier and viewing area is presently located.

When asked if people will still come to visit the glacier in 2050, eight out of 10 participants agreed people will still come, one participant was unsure. One participant said less people would stop because it would be less of a hook for visitors, but they also said “lake forms, people would love it, maybe more beautiful and safer” - JNP08.

Regional implications

Two participants said there would be no local implications if the glacier disappeared and one didn’t answer. One participant said that although the impacts would be negative, people would still visit the Rockies, they explained

Climate change [is] going to have impact, slow and long and drawn out. [I] predict [there will] still be lots of visitation to [the] Rockies...If people can still

get on glacier it will be very expensive and similar to Franz Joseph glacier experience in New Zealand. – JNP09

4.1.8 Is there a difference between how concerned stakeholders are about climate change personally or professionally?

Results indicated there is a slight difference between stakeholders concern of climate change personally and professionally. When asked how concerned participants were about climate change personally, five were extremely concerned, three moderately concerned, one was slightly concerned, and one participant did not answer. No one indicated they were either not at all concerned or somewhat concerned about climate change personally.

When asked how concerned participants were about climate change for their business, five responded extremely concerned, two moderately concerned, one not at all concerned, and one did not answer the question. No one indicated they were either slightly concerned or somewhat concerned about climate change for their business.

All the participants from Jasper National Park agreed the glacier has and will continue to recede, although, estimates of reduction in extent were variable:

“Lose an average 10-30 meter off lower edge of glacier every year, over 30 years, .5 km of ice at the foot [has been] lost, now [it’s] a whole different type of terrain” – JNP09.

“Huge since I’ve been here, first time in 1997 it used to be very different, parking lot [was] about 1 km away and you had to hike in differently” – JNP03.

“Yes, we measure the glacier – we have a monitoring program on the glacier, work with geological survey of Canada, it’s disappearing at a rate faster than 5 meters per year” – JNP10.

Two participants believed within 10 years tourists may not be able to hike up onto the glacier, only trained mountaineers will be allowed on. One participant discussed the inherent hypocrisy of tourism at the glacier stating “The glacier continues to recede yet we continue to allow access, then access will make inroad deeper into the wild area around the glacier which could impact commercial development and ecological integrity in Jasper” – JNP07.

Overall, participants suggested the glacier has remained the same aesthetically, noting any changes were attributed to the natural processes of the glacier. Only one person indicated aesthetic changes stating, “A lot worse, a lot browner this year, this year looked really dirty” – JNP08. The rest of the participants described the glacier being dirty as a natural product of moraine debris not being washed away. One participant explained, “Yeah, getting dirtier looking, a lot of debris on glacier, dust and glacier moraine, ice disappears faster than that stuff does so it looks dirty over the years” – JNP10.

As for any surrounding changes such as vegetation or snowpack, participants agreed the landscape surrounding the glacier remains the same. Although, one participant suggested it is hard to see surrounding landscape changes on a yearly basis, stating “The glacier is a dynamic environment always changing, like the tree line, it fluctuates, we don’t notice it every year, but comparative photos can really show what’s happening” – JNP09.

Five of the Jasper participants indicated they don't believe their business will experience business risks, most of the smaller guiding parties that work on the glacier will likely be able to find other viable routes if needed, this shows stakeholders believe they will be able to adapt to future climate change effects. One participant stated they won't experience business risks "Because we don't go on the glacier directly, people still drive the parkway, glacier is a stop along the way" – JNP02. There was one participant who explicitly stated climate change will cause their business to experience huge risks, stating "Yes, [I] won't have a business if it changes and disappears" – JNP09.

Several participants suggested visitor safety will be a major concern when climate change affects are increasingly felt. "As more people become interested in outdoor activity – more rescues – less visitor safety as [the] glacier becomes more broken/crevasses and challenging – will affect safety" – JNP06. Hazards will likely increase with the receding glacier, "The quicker the retreat the harder it will be to access and the more dangerous" – JNP06. One participant suggested visitor safety is a major concern already and will continue to be, but the way the glacier has receded has created a safer terrain "Visitor safety [is] always a concern for us, but right now [the] glacier [is] safer than 30 years ago. The terrain configuration on the lower part of the glacier is safer; it used to have more and deeper crevasses" – JNP09. Another agreed that it is not necessarily the glacier that is becoming unsafe, rather the dynamic of more visitors wanting to explore the glacier but not being properly trained to do so, "It attracts more people, not getting less safe, but more people and less of Parks Canada presence at glacier becomes an unsafe situation" – JNP10. Some participants mentioned the safety precautions already in place to increase visitor safety in the area,

“Signage in Banff & Jasper is good – not [allowed to] walk on to the glacier alone – pretty solid/tightened up regulation” – JNP02.

All the participants agreed the glacier is a huge educational resource for climate change:

One of the best places to show/demonstrate climate change and glacier retreat.

Mark where glacier was in term and how the glacier has changed, best way to capture it. When see it people get hit – not just a few feet per year. – JNP06

Parks Canada’s low level of involvement with climate change education at the glacier was seen as a highly controversial topic. Some suggested Parks Canada was not taking advantage of the glacier as an educational resource for climate change and conservation. “Parks Canada doesn’t want people to know about climate change, government doesn’t want to talk about it, controversial topic” – JNP03.

Others discussed noticing visitor changes and involvement in wanting to become more aware of climate change and the glacier “People are becoming more aware, asking more questions and bringing education home with them” – JNP02.

One participant discussed the importance of the glacier as an educational resource not just for climate change and glaciation but for the whole region:

Huge significance, one of the only places you can step on dynamic moving piece of ice. Connects people to the environment and processes at work everywhere in the Rockies. You could trace a drop of water all the way to the ocean from the glacier. – JNP 09

In terms of access to the glacier being affected by climate change, two participants discussed how access is already changing at the glacier due to climate change, with one stating “Climbing routes [are] already changing” – JNP04. Six of the participants replied it was important for visitors to be able to walk on the glacier and seven participants said it was important for visitors to see the glacier. Only one participant noted it was not important to walk on the glacier, they explained “It is important to a segment of people who want to do that” JNP04. One participant explicitly stated it is important for visitors to not have access to the glacier “From a conservation standpoint, we would think it is very important that tourists NOT be able to walk on glacier” – JNP07. This contradiction is likely due to individual stakeholder’s organization mission and goals. But the other participants agreed it is important to have access, one stated “I think the ability to touch/walk on the glacier is important in understanding the area” – JNP06. Another explained “I would really recommend seeing it, because of [the] beauty and changes that are happening, it is very important” – JNP09.

4.2 Stakeholder Interviews: Churchill, Manitoba

4.2.1 Response Rates and Stakeholder Demographics

The response rate for Churchill was 13%, with a total of 51 people contacted and seven participating. There were two surveys returned and five interviews conducted. The lack of response in Churchill may be attributed to the time of year, as many of the Churchill contacts were unable to participate during the first and second round of interview collection dates due data collection occurring at the same time as the polar bear tourism season preparation. The third round of interviews took place after polar bear season to account for this issue, but response rates were still low. Churchill is popular research location and local stakeholders may feel survey fatigue. In addition, researchers were able to go to Jasper National Park to conduct interviews in person which proved to be more effective.

There were four participants who identified as tour operators, one participant owned an inn, one worked for Wapusk National Park and one was an education facility providing research and educational courses for visitors. Participants gave a variety of responses when asked about employment base; five were small businesses under 15 staff, with seasonal local and non-local workers during peak times, one from Wapusk National Park said they hire Canadians and local workers. One participant did not answer.

The average length businesses have been in operation is 26.2 years. Participants had well established businesses at both locations. Parks Canada was taken out of that calculation, as it would have skewed the data since it has been established for over 100 years.

All participants provided guided tours or interpretation for a variety of attractions including whale watching, photography, birding, and polar bear tours. One stated they provide accommodations and equipment rentals for scientific researchers and education, this organization also offers courses.

4.2.2 Significance of Polar Bears

All participants agreed that the polar bears have a huge significance in Churchill as a visitor attraction, economic resource, and educational resource. One participant described the bear's importance as a visitor attraction, "Pretty big part of the attraction, I'd say 80% of visitors are going to see the bears" – CH04. Another participant elaborated, "Primary draw for Churchill by a long shot is the polar bears, they are almost synonymous with Churchill" – CH07.

The polar bears are recognized as an important education resource and tool, one participant stated "Huge significance, they are one of the top predators being affected by climate change. Race for people to see this great predator while they are still easily accessible" – CH03. Another participant explained, "Most popular program , they are what attracts the most people to the [business]" – CH02. This participant went on to elaborate that they offer five-six general education courses in the fall, with the main topic being the polar bears. As well they reiterated the importance of the bears in terms of a climate change educational resource, "Resource – forms tangible link between climate change, human impact and issues relevant to polar bear management, visible and charismatic species – bridge complex issues with public" – CH02

In terms of an economic resource, one participant described the impact polar bears have for their business, stating "Generates majority of income, average year 65-70% of non-credit course revenue comes from polar bear programs" – CH02. All the

participants agreed the bears are not only important for their own business, but also for the community:

“It is a great significance for the Town of Churchill, it is hugely dependent on economic runoff from polar bears” – CH03.

“Significant part of economic base of entire community” – CH06.

“Polar bear tourism and tourism in general is in top 3 economic drivers for the community of Churchill” – CH01.

“Backbone – wouldn’t have type of infrastructure without polar bears” – CH02.

“Significant 60-70% tourism driver” – CH07

When asked of their dependency on the polar bears, it was evenly divided between high and medium dependency. One participant stated they had high dependency on the polar bears, but are constantly trying to diversify, they said “High. That being said we are a ‘tourism company’ not a ‘polar bear tourism company’. We continually look for opportunities to diversify overdependence on one specific product” – CH01. A participant that described their dependency on the bears as medium suggested they have adjusted their business in order to not have such a high dependency on the bears. They state “Medium – not as high as it used to be. Not dependent – obviously if there were no bears we would have reduced education programs but we would still have one” – CH02. Another participant said their dependency on the polar bears is for protection purposes only, “Dependence as primary species at risk that we try to manage habitat, not dependent as tourism aspect” – CH07.

All participants agreed polar bears are the major draw and primary attraction for the majority of visitors to Churchill. Although, there are other opportunities available, the most common mentioned were beluga whale watching, birding, and northern lights. One participant elaborated on the importance of polar bears as the primary attraction they stated, “Polar bears are how many people find out about Churchill. Major draw/primary reasons for tourism basis...main motivation tourists come to see bears and see them in their natural habitat. Climate change and media...item on bucket list” - CH02. Many other participants described the other attractions available; one stated, “Another big attraction is whale watching. The best place on planet earth to view beluga whales. Healthiest population 3000-4000 in Churchill arrive each year” - CH03. This participant went on to describe the importance of birding as well, “Churchill is one of the top 10 birding sites in the world, but a lot of people don’t know, the serious birders have to do Churchill in their lifetime” - CH03.

4.2.3 Visitor Motivations and Satisfaction in Churchill, Manitoba

Participants agreed visitors’ main motivations were to see wildlife. One participant stated perception of the site has changed, “Perceptions changes - ‘come now before they are gone’ aspect has changed over time” - CH02. One participant did suggest visitor motivations have changed over time:

I think they have changed, management practices of tour companies have changed in response to visitor changes, for some people it’s a type of bucket list which wasn’t as common 15-20 yrs ago, some connect to last chance and how it’s a rarity and represents change to the world and they might not be in that region for that much longer. - CH07

All participants, except one, agreed visitors to Churchill are satisfied with their experience, one stated “The feedback we receive from guests in terms of survey results, repeat visits and referrals indicates our guests are overwhelmingly satisfied with the well-rounded experience we provide them, yes” – CH01. Another participant just said “Very satisfied, 95%” – CH05. While the participant that did not agree says visitors may be less satisfied, they explained “Less satisfied, increase in visitors has caused a lot of policies and conservation just changes the experience” – CH04. This statement says the increase in visitor numbers has influenced policy development at Churchill, which may attribute to a low visitor satisfaction.

4.2.4 What marketing strategies are stakeholders employing?

Overall, results indicated participants from Churchill have limited marketing strategies, similar to participants from Jasper National Park. There were five participants from Churchill who indicated they did have a marketing strategy. One explained “I attend one big trade show every year...most people who come on our tours find us on the internet” – CH03. Another participant said they do not have a special marketing strategy, mostly brochures of offerings. Although, they did indicate they strive to stay away from marketing polar bears stating, “As an organization, we have worked hard to down play prominence of polar bears in marketing – more focus on other programs such as ecology” – CH02. Another participant stated they promote the world class tourism they provide, “We do that by controlling the things we can control, so we focus on safety, quality guiding, cuisine, helping guests acquire a sense of place etc.” – CH01.

Future changes to marketing

Results indicated changes to marketing will be linked to seasonal changes. Already operators are trying to promote Polar Bear tourism in the summer some of the participants suggested summer was a better time to visit Churchill because there is so much to see. One participant stated “Seasons are becoming blurred, trend toward coming early in August and see all four programs - Northern Lights, Beluga Whales, Polar Bears and Birds” - CH02. Only one participant at Churchill said they would not need to change marketing techniques.

Website image analysis findings: Churchill, Manitoba

Table 7 provides links and shows the list of websites used for the Churchill, Manitoba image analysis.

Table 7. List of websites: Churchill, Manitoba

	Website Name	Link
1	Everything Churchill	http://www.everythingchurchill.com
2	Lazy bear lodge	http://lazybearlodge.com/
3	Churchill wild	http://www.churchillwild.com
4	Hudson bay heli	http://hudsonbayheli.com/
5	Heartland international travel and tours	http://heartlandtravel.ca/
6	Great white bear tours	https://www.greatwhitebeartours.com/
7	Frontiers north	http://www.frontiersnorth.com/
8	Churchill subarctic tours	http://www.macriphoto.ca
9	Churchill science centre	http://www.churchillscience.ca/
10	Churchill nature tours	http://www.churchillnaturetours.com/
11	Bluesky mush	http://www.blueskymush.com/
12	Polar inn & suites	http://www.polarinn.com/
13	Wapusk adventures	http://wapuskadventures.com/

14	Tamarack rentals	http://www.tamarackrentals.ca/
15	Sea north tours	http://www.seanorthtours.com/
16	Rail travel tours	http://www.railtraveltours.com/
17	Northern soul	http://www.northernsoul.ca/
18	Nature 1 st	http://www.nature1sttours.ca/
19	Classic Canadian tours	http://www.classiccanadiantours.com/
20	Travel Manitoba -	http://www.travelmanitoba.com/

The Churchill analysis was completed second, a total of 25 categories were developed with 1843 images analysed (Figure 10). Again the categories were edited and merged into more thematic categories. For example, ski-do and snow shoe tours were merged into a snow tours category. The final count of categories in Churchill is 19.

There were 430 images of polar bears tallied. The next three largest categories of photos were other wildlife (193), beluga whales (182), and northern lights (166). The categories with the least amount of photos were snow tours (2), safety (3), and helicopter tours (3).

There was substantially more images on the Churchill websites compared to the Jasper websites. The Churchill websites had more previous visitor galleries, only the TripAdvisor website from Jasper had a gallery of photos. The travel Alberta website had a lot of galleries with 34 categories, but these categories and associated images were of all over Alberta and not specifically Jasper National Park, therefore, they were not included.

Findings show images of polar bears were the main focus for a lot of websites. This indicates stakeholders use the images of the glacier and polar bears to attract visitors. The ability to upload photos from trips may influence prospective visitors as well it may become a part of the visitor experience.

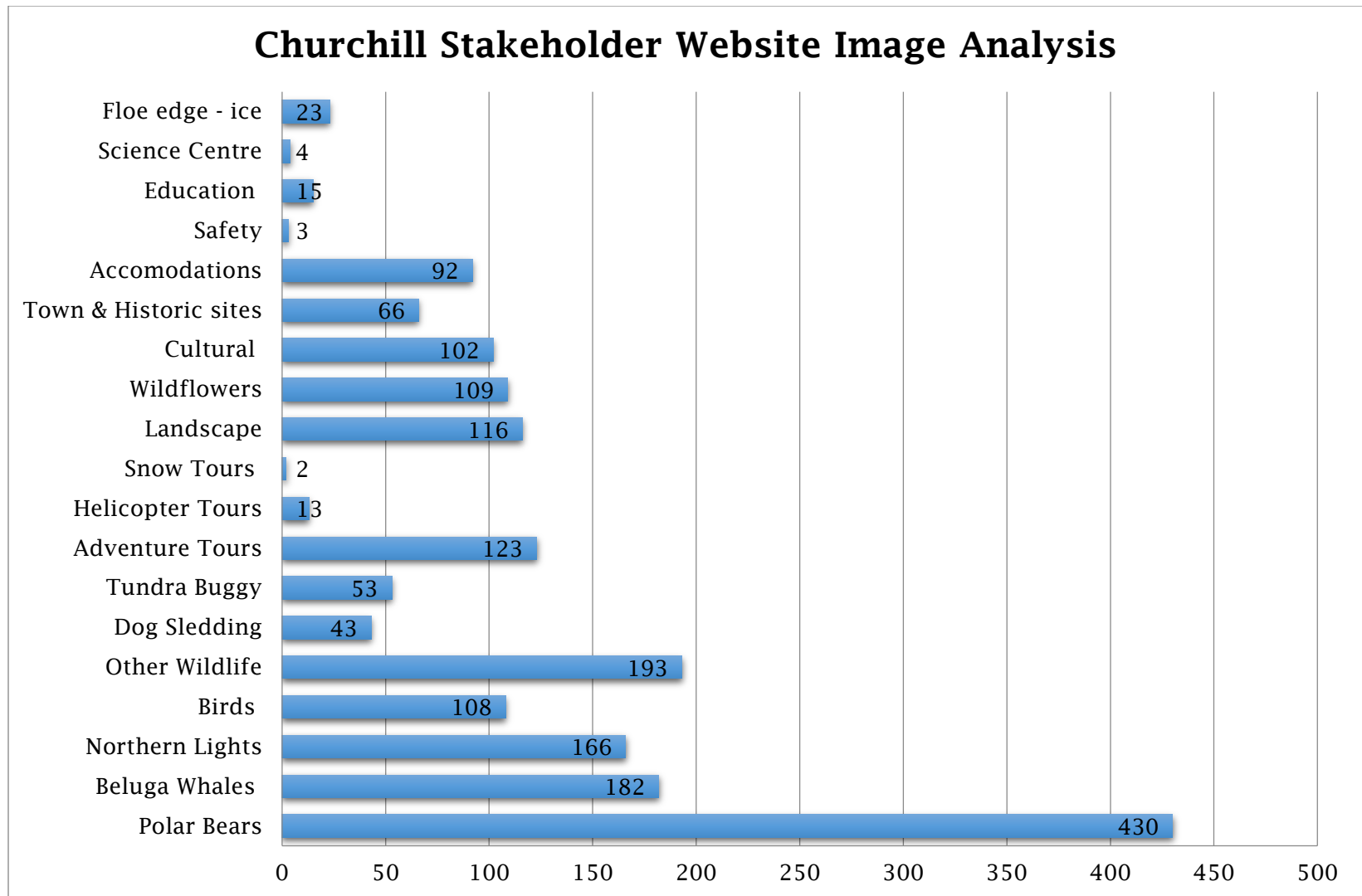


Figure 10. Churchill stakeholder website analysis

4.2.5 Do Stakeholders take advantage of the Last Chance Tourism phenomenon for economic gain?

Results indicated stakeholders are not using the LCT phenomenon for economic gain. Many stakeholders believed LCT is negative and a manipulative way of marketing destinations. Overall, participants agreed the media has a huge influence on expectations and often use LCT and portray the destination inaccurately.

Visitor expectations and media influence in Churchill, Manitoba

Many participants did not elaborate to explain what they thought visitor expectations were, but they agree popular culture and the media forms visitor expectations:

“Almost exclusively media, what they hear in new or see in documentaries. Many people have no real understanding before they hear or see something in the news. Shaped very much by what they see or read in the media” – CH02.

“Probably everything in media. Media really writes a lot about polar bears and changes to the Arctic environment” – CH03.

“I think guests expectations are formed in large part by what’s experienced in popular culture” – CH01.

One participant explained further what they think visitor expectations are and suggested they depend on where the visitor is coming from:

I think a lot of it is reputation, depending on which market they come from, eastern cultures marketing and promotion is so intense. [International or global

scale expectations] associate bears with climate change or global change. People come with expectation [Polar Bears] are on the brink of extinction and they are starving and about to die, but so many other factors that affect their health so those expectations are skewed a little bit. – CH07

Overall, participants stated media does not portray polar bears accurately. Two suggested yes they did, two indicated in their own promotional and marketing yes, polar bears are accurately portrayed. Four said the polar bears are not portrayed accurately in media, one stated “No, polar bears do not frolic on the ice like penguins or drink coca cola with seals, they hunt seals” – CH02.

One participant elaborated how popular polar bears are positioned in several businesses marketing campaigns they said:

Anecdotally, polar bears hold a very strong position in popular culture, arguably because of their anthropomorphic qualities they are perceived as cute and lovable. Polar bears are employed by major international brands such as Coca Cola, Klondike Bar, Stanfields, and Brandenburg Rum to aid in their marketing efforts. – CH01

When asked about Frommer’s “500 Places to See Before They Disappear” listing Churchill as one of the sites, there was a very mixed response, but the majority of participants had negative views towards this type of media exposure. One participant stated “They are lying to people, they put fear into people to get here fast and see the devastation for themselves” – CH06. Another discussed how this type of media exposure create an artificial crisis, they explained “When someone reads they need to go to Churchill before the polar bears are gone – that type of media creates artificial

crisis” – CH02. This participant elaborated that the crisis created by media is not accurate:

Serves to reinforce critical situation in Churchill, Facts – polar bear’s population is in decline, researchers attribute this decline to climate change. During [our] program when ask ‘why they come’ - ‘Thought that it was time to see them before it was gone’ is a frequent response. But course led by researchs explain the situation to them. – CH02

People may come based on this perceived crisis created by media reports, but they leave realizing that they needed to come see the bears in their lifetime. Not the polar bears’ life time. The participant continued to explain saying “An 80 year old would say ‘I need to see them before they are gone’ but actually the visitor is going to be gone before the polar bears are” – CH02.

4.2.6 Have stakeholders made adaptations to deal with climate change impacts?

Only two participants described actual adaptations they have made but some described working with Parks Canada on business adaptations. When asked what actions or strategies participants have implemented, four said they had not adopted any actions, one participant did not answer and two described actions taken. One says they have diversified educational programs, explaining “Ramped up safety program to ensure researchers are safer. Diversified educational programs so that we are not as economically dependent” – CH02. The other participant who indicated actions taken said they will shift seasons when it becomes necessary, as they have done in the past. One participant suggested they had not taken any direct actions but assist in providing information for adaptations on a national level.

Another participant explained protocols they have taken to ensure future business success, “Our teams regularly audit our own processes and protocols and we work closely with Manitoba Conservation and Parks Canada in this process, it’s in our combined interest, (business or otherwise) to ensure Churchill’s polar bears remain healthy” – CH01.

New developments

In Churchill, a new program is a “Walk with Bears”. One participant describes the program and its creation,

Developed marketing around being at ground level with bears – Alternative to tundra buggy experience. [Now a] shift towards – stay at lodge and we will take you out to walk with the bears everyday. Guides are trained to provide in a safe way. – CH02

This participant suggested this program was developed because visitors are seeking out new experiences, they state “Visitors are becoming more savvy...more educated about the experience they are seeking out” – CH02. When another participant was asked about this new program they said “I would never do that, it’s not safe” – CH03.

Influencing other business’ adaptations

When asked if park managers have influenced strategies, many participants explained Parks Canada’s influence in Churchill. One participant said his operation works closely with Parks Canada and Manitoba Conservation, explaining “We’ve learned a lot from each other we’ve contributed a lot of observations we see from the field. Parks Canada have lead us in terms of conducting environmental assessments” – CH01. Another participant mentioned Parks Canada has largely influenced the area

through the creation of Wapusk National Park. But, another participant suggested the park has not made changes in the bears. One participant suggested Parks Canada contributes to their research efforts saying “Increase in financial resources in research of polar bears in summer. [They] attempt to introduce more people to Wapusk National Park in a safe way” – CH02. Another participant supported the point that Parks Canada works with the local stakeholders saying “Part of our business management plan [is] to be much more active in being part of [the] regional tourism groups, programming with partners and stakeholders in [the] community and can reach out to people in different ways” – CH07.

4.2.7 Are stakeholders prepared to make adaptations necessary to deal with climate induced impacts?

Some participants believed they would adapt to climate changes when necessary. They also discussed that if the polar bears left the area it would cause severe negative impacts in the region. Two participants agreed they will have to eventually diversify and downplay marketing of polar bears, one stated “Further downplay of polar bears, remarketing Churchill – variety of experiences, branching out. Trend – year round tourism natural response to fill shoulder season and prepare for time when not as many bears” – CH02. Another participant reiterated this point and explained further “Now trying to get people to come up in summer to see bears, beautiful in spring, get whales, bears, icebergs” – CH05.

When asked what will happen when the attraction disappears, one Churchill participant said they would have to leave town. Another said they think the economic driver in the community will shift from tourism to shipping.

Regional implications

In Churchill, all the participants agreed that if polar bear tourism stopped it would be a huge impact. The hotels, restaurants, gift shops, and the entire tourism infrastructure would close, one participant explained “Significant impact, not sure how to quantify, but the whole service industry focused on polar bears, maybe one or two hotels would stay around. Beluga [and] marine interactions not as marketed or promoted, so maybe they will start to be” – CH07. A program or industry may develop elsewhere, wherever the polar bears move to along the Hudson Bay if they are still accessible. One participant said it would be horrible for the local community, but tourism companies are mostly large corporations who hire seasonal workers, they explain “Stakeholders of large companies don’t live here ... Churchill transient population, only 500-600 live there year round. Very seasonal, and seasonal workers would just go elsewhere” – CH04.

4.2.8 Is there a difference between how concerned stakeholders are about climate change personally or professionally?

Results indicated there is a slight difference between stakeholders’ concern of climate change personally and professionally. When asked how concerned participants were about climate change personally, two were extremely concerned, one moderately concerned, two were slightly concerned, and two were not at all concerned. No one indicated they were slightly concerned about climate change personally.

When asked how concerned participants were about climate change for their business, two were moderately concerned, three were somewhat concerned, and two were not at all concerned. No one indicated they were either slightly concerned or extremely concerned about climate change for their business.

Churchill participants were not in agreement as to the visible changes they have noted of the bears. Most participants described the bears as healthier as or fatter than in the past. Although, one participant states “Changes since the late 70s – biggest bears aren’t as big as they used to be, observe more mom and cub groupings, sparing behavior tends to be more prevalent these days” – CH01 . Two participants said they have been seeing fatter bears, “They’re fatter, so heavy their bellies touch the ground” – CH05. One participant said the conditions are the same “Mostly pretty good, we’ve only seen one skinny bear that was really old with a broken jaw so he couldn’t eat” – CH03. One participant explained there have been some body mass differences, but these changes can be attributed to a number of reasons, including the removal of the military in the area:

Major changes in that region is military moved out, a lot of supplemental feeding and hunting taking place by military, so number and size [was] heavily influenced by military. Polar bears live so long so these affects take a long time to cycle out, probably 20-30 years, there are still currently military bears and dump bears around in Churchill. – CH07

A few participants discussed seeing more bears in Churchill. They explained that although more bears provide increased opportunity for visitors to experience, the bears the increased presence causes havoc during the summer months in town:

“More bears around in summer, which means extra precaution and higher level of safety required” – CH02.

“Increase, to me there are more bears and more causing more damage, cabin on button bay last 3 years broken in 6 times from the bears” – CH05.

Only one participant explicitly stated the bear numbers are decreasing in Churchill, “Yes, the bears used to be about 1,200 now down to 900” – CH03. A participant attributed these changes in numbers to the surrounding area conditions they stated:

When we do see reduced numbers of bears in any given season, it’s more likely because of break-up on Hudson Bay has occurred far away enough from Churchill that the polar bears don’t bother making their way near the community. – CH01

One person attributed changes in numbers to the seasonal changes occurring, “Season shrinking and see less bears because of shorter time. [In the] 80s best polar bear viewing was in August, then September, then September/October, now mid-October/November.” – CH04. While another participant attributed the changes to the changing knowledge base, “Numbers have decreased slightly, but has been stable for a number of years, current [knowledge] anecdotal, traditional knowledge not as extensive as you would think, not as many people on [the] landscape” – CH07.

One participant explained the area is still in great condition, “Still really good – everything is still pristine. Tundra vehicles have little impact on the environment – they have specially designed tires that have minimal impact” – CH03.

One important issue raised, was a lack of problems in regards to visitor safety. Participants agreed Churchill is very safe; everything in Churchill is under a “microscope”, they do not tolerate visitors doing unsafe behavior. “Totally safe – behave in certain manner, if on Tundra vehicle – no straps, no scarves hanging down, not allowed to put a foot on the ground in the wildlife area” – CH03. Tour operators

have highly trained staff, one participant stated, “We ensure polar bears and humans end up extremely safe from each other. We require field staff to possess first aid and fire arms training and employ safety officer and conduct animal polar bear safety training” - CH01. One participant did explain some visitor safety issues, but that practices have become better:

More days bears on land than on ice means higher probability of interactions with people, behavioural changes over time as they become hungrier. General practices in Churchill have become a lot greater, but more education programming and food handling safety policies implemented in the community.
- CH07

Four participants said climate change will not cause them to face business risk, two said they will face business risks and one did not answer the question. One of the participants stated they will face business risks along with other risks to the community, “Yes, financial risk because less people coming to see bears, changes in movement [may cause] safety risks - polar bears nutritionally stressed frequently coming into buildings - high level of risk” - CH02.

All of the participants agreed polar bears are a significant education resource. They are seen as the “poster boys” for climate change, “Advocacy group use bears as a symbol” - CH02. Only one participant suggested polar bears may not be a great educational resource for climate change, but still a useful resource. One participant stated “Forms tangible link between climate change, human impact and issues relevant to polar bear management” - CH02. They went on to expand that the polar bears are a “Visible charismatic species - bridge complex issues with public” - CH02. One

participant discussed the importance of educating guests on the tours their company provides:

Some of our guests are invested in the effects of climate change, some don't care. It's our job to make sure we covertly educate our guests so they come away with a greater appreciation for the north and also regarding Churchill, to acquire a better sense of our place. – CH01

Many participants explained visitor education or understanding of climate change and the polar bears is very basic and extreme. One participant explained, “Polarized understanding, ice disappearing – bears drowning – every extreme” – CH02. Another stated “Unrealistic misinformed expectation of how bears are affected by climate change” – CH05. Therefore, guides and tour operators feel they have a responsibility to try to educate visitors and give them a realistic understanding.

The Churchill polar bears are widely recognized as a highly researched population, attributing to the importance of them as an educational resource. “Canadian Arctic has 11 different populations Western Hudson Bay population is researched a lot and is the most predictable population” – CH04. They are not just an educational tool for visitors, but for students, and conservation organizations. One participant explained, “Since 2000 Polar Bear International (PBI) has been working to conserve polar bear habitat and polar bears as a species. Each year PBI operates a number of field programs in Churchill to further their polar bear conservation efforts” – CH01.

Two participants don't believe access to the polar bears will change. One participant stated access to the polar bears will not change in the next 20 years.

Although some participants believe polar bear access will not change in the near future, many discussed how there have been seasonal changes occurring in Churchill, one participant explained “Yes, we see bears move during summer months. Chances low previously to see bears in summer. Now it is a surprise if we didn’t see a polar bear in the summer” – CH02.

4.3 Summary of Results

In conclusion, Table 8 shows summary of the results answering the research questions.

Table 8. Research Question Answers

Research Questions	Results
1. What marketing strategies are stakeholders employing?	Stakeholders have limited marketing strategies
2. Do stakeholders take advantage of the Last Chance Tourism phenomenon for economic gain at each respective case study location?	Stakeholders do not use the LCT phenomenon for economic gain
3. Have stakeholders made adaptations to deal with climate change impacts?	Some stakeholders have made a variety of adaptations
4. Are stakeholders prepared to make adaptations necessary to deal with climate induced impacts?	Stakeholders believe they will make changes when necessary
5. Is there a difference between how concerned stakeholders are about climate change personally or professionally?	Slight difference between concerns of climate change personally and professionally.

Chapter Five: Discussion

The purpose of this research was to explore the dynamics between climate change and business planning of stakeholders at two chosen case study sites. There was a variety of stakeholders represented in this research, providing a variety of responses and themes. The findings suggest climate change is an important concern for stakeholders and some adaptations, including product diversification, have already been implemented. The findings also contribute to discourse of the ethics of LCT and marketing tourism destinations.

5.1 Climate Change Attitudes and Perceptions

There is only a slight difference between how concerned stakeholders are about climate change personally or professionally. There were 11 participants who said they were either extremely (7) or moderately (4) concerned about climate change personally. There were nine participants who said they were either extremely (5) or moderately (4) concerned about climate change for their businesses.

Scott, Jones, and Konopek (2007) say climate changes will affect nature-based tourism by impacting the physical resources that define destinations, which they are dependent on. The physical resources are already being affected at the research locations. All the participants agree the Athabasca Glacier is receding, scientific monitoring substantiates this claim. While the participants at Churchill did not agree that the polar bears have been negatively affected by environmental change, the polar bears are not the only environmental resource these businesses rely on. All participants agreed seasonal changes have occurred, this has changed business operations over the years and is a perfect example of the ways in which climate change

will affect tourism destinations. It is a slow process, slowly changing the polar bear viewing season from August in the 1980s to November this past year.

Some of the participants described experiencing indirect climate impacts as suggested by Scott and Lemieux (2010). Figure 11 shows the temporal scales in which climate influences different subsectors of tourism, indirect climate impacts stakeholders of this study described experiencing are outlined in yellow. Jasper participants described having to change climbing routes, as well as making adaptations because of the changing glacier environment. Churchill participants explained they have begun to diversify program offerings, they explained this is being done so that in the future they do not experience as severe negative economic impacts. Both locations described several socio political measures being taken to ensure the safety of visitors such as increased signage at both locations and policy changes at Churchill.

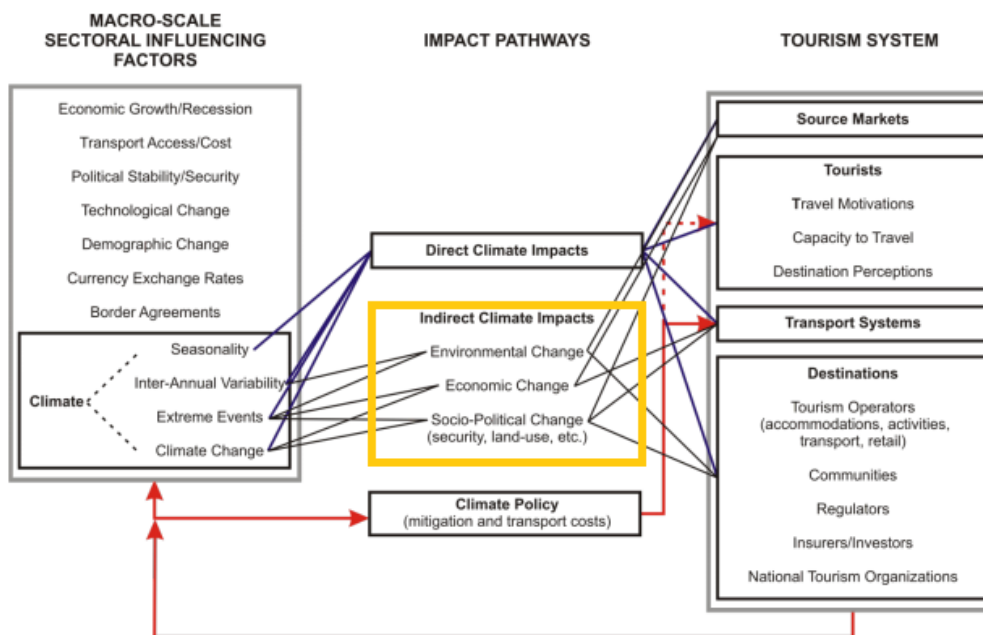


Figure 11. Adapted framework of climate influences on case study sites

Visitor safety was a huge concern for stakeholders at both locations. While Churchill stakeholders suggested the area is completely safe, they explained this is because of the strict policies in place. The Jasper stakeholders described that signage has increased at the site to prevent visitors from going on the glacier. They also explained the glacier may be perceived as unsafe because it is accessible to those who are not properly trained to explore its terrain.

Dawson et al. (2010) states that tourism destinations in Polar Regions are thought to be particularly vulnerable to climate changes and are expected to display the first signs of environmental change. This is apparent, participants have already had to make adaptations to business practices; they are already showing the first signs of environmental change.

Climate change has been identified as the “greatest challenge to the sustainability of the global tourism industry in the 21st century (UNWTO-UNEP-WMO, 2008 as cited in Dawson et al., 2010). Results indicated that Jasper participants are more concerned with climate change impacts than Churchill participants. Several participants from Jasper expressed concern for climate change because of how easily it can be ignored. The receding glacier will not just have negative impacts on the tourism industry in the area, but as one participant points out, it will have dramatic negative consequences for the region. The Athabasca glacier feeds into the Athabasca River and is an important water and energy source for the surrounding region. The waters originating from the Columbia Icefields flow north to the Arctic Ocean, east to Hudson Bay, and south and west to the Pacific Ocean (Parks Canada, 2014).

5.2 Adaptive Capacity and Community Trust

Engle (2011) suggests there is much to gain by examining preparation for and responses to recent climatic events to understand how adaptive capacity can assist in future climate change circumstances. In a previous study conducted by Lemelin et al. (2010), they reported stakeholders believed they will be able to adapt to climate changes when they occur. The findings from this study reinforce Lemelin et al. (2010) findings; participants from both sites suggested they will be 'resourceful and inventive in light of change' when more adaptations need to be made.

Findings from both Jasper and Churchill suggested stakeholders have been able to adapt to seasonal changes. The goal of adaptations is to reduce vulnerability and impacts of climate stimuli or their effects. Engle (2011) suggests increasing adaptive capacity will improve the opportunity of systems to manage varying ranges of climate impacts, while allowing for flexibility to rework approaches. Although adaptations to environmental changes have been made at the study locations, they seemed to have been implemented on an as needed basis. Scott et al. (2009) explain there are few corporate policies on climate change that exist in the tourism-recreation sector. This is likely causing adaptations to be made on the as needed basis as seen in this study. As well, the lack of advanced planning for adaptation is explained by Dodds (2010) who found business will act more quickly to make adaptation to climate change when there is a financial or legal motivation to do so. While there are adaptations occurring, it cannot be determined through the data collected if the adaptations improve the ability of the system to manage climate change impacts in the long term, but there is indication some stakeholders are being proactive while others are not.

Scott, de Freitas, and Matzarakis (2009) suggest climate adaptations in the tourism-recreation sector are comprised of a complex mix of adaptations undertaken by diverse stakeholders. Figure 12 has been adapted to show how the results of this study align with the suggestions presented by Scott et al. (2009). The blue box shows the recreation-tourism opportunities available at the case study locations which are shown to have a large need for coping strategies. The green and yellow boxes show where the case study sites and stakeholders fit within this framework.

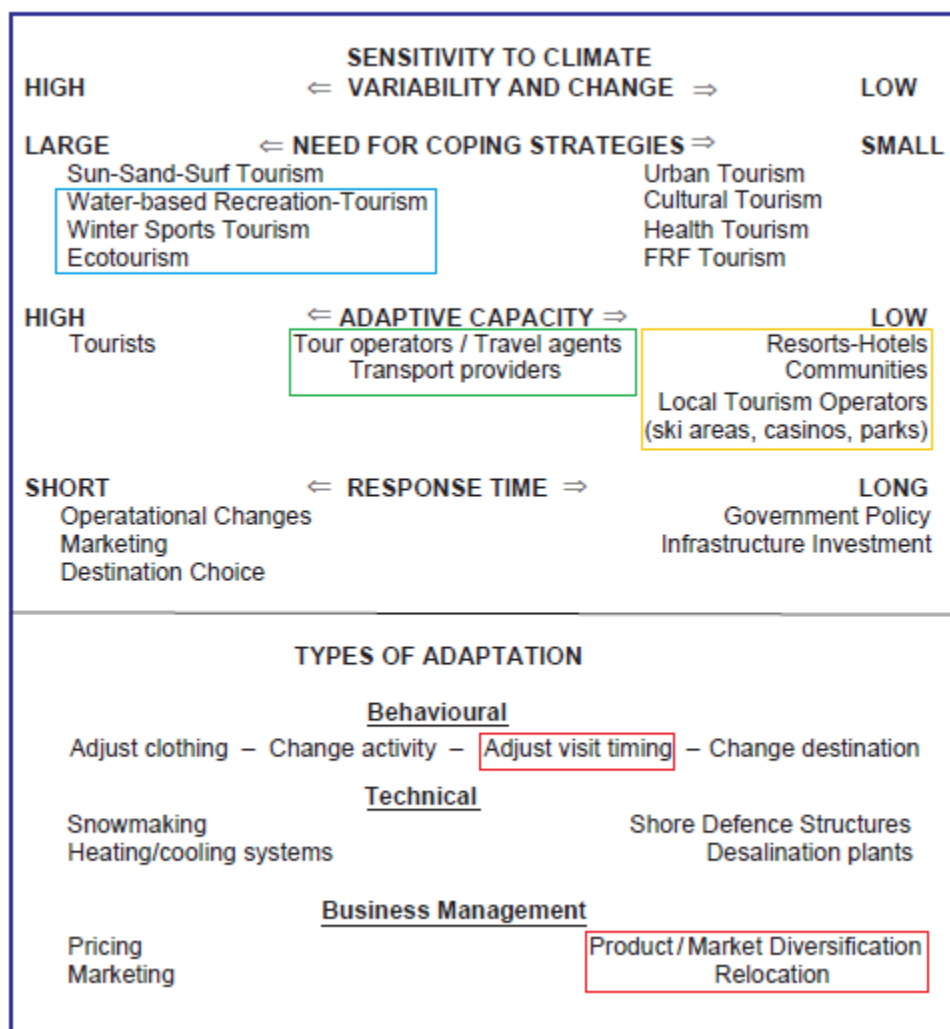


Figure 12. Framework showing adaptation results from case study sites

The larger businesses such as Brewster and Tundra Buddy offer transportation services and are tour operators (green). Scott et al. (2009) suggest these types of businesses fall in the middle of the adaptive capacity spectrum. The results from this study confirm this designation; participants indicated these businesses have a majority share on the tourism activities at the case study sites. One participant from Churchill even discussed how Tundra Buggy essentially controls the tourism season by establishing when the Tundra Buggy's are available. Scott et al. (2009) also suggest larger companies like Brewster, who is a conglomerate that operates at multiple locations, are better prepared to deal with climate changes. Scott et al. (2009) state the "conglomerate business model may prove to be one of the most effective adaptations to future climate change" (p. 182). They explain conglomerates provide greater access to capital and marketing resources, therefore enhancing adaptive capacity, reducing vulnerability and enabling regional diversification in business operations.

The smaller community, local tourism operators, and hotels (yellow on Figure 12) have lower adaptive capacity. As Scott et al. (2009) explained, this is because small-medium size enterprises are at greater risk because they often do not have substantive economic reserves or access to capital. A series of economically marginal years may be all that is required to bankrupt a business (Scott et al., 2009). The results of this study also support this; some stakeholders from both locations explained climate change will eventually cause their businesses to close. Many participants from Churchill stated if the bears no longer come into shore near Churchill they will have no tourism business, others said their programs will be diminished, but they will still offer something to the public. One participant from Jasper explicitly stated they give their business another 10 years, they even suggested that they thought their business was done when the glacier receded and a river was formed at the toe a couple years ago.

The results from this study also confirm two different types of adaptations suggested by Scott et al. (2009) and are presented in red on Figure 12. While the behaviour section of this framework is directed toward visitors, it can also be applied to the Churchill area. Several participants explained the polar bear tourism season has shifted in the past several decades. Polar bear tourism does not exist anywhere else in Canada therefore; seasonal adjustments are required on behalf of the tour operators and visitors.

The largest type of adaptation identified by the findings of the study is Business Management adaptations (product/ market diversification and relocation). Both case study site participants explained several product diversification and substitution strategies. Churchill participants explained they have begun to diversify tourism in Churchill. Polar bear tourism is still visitors' main motivation as identified by participants, but beluga whale watching, birding, and northern light tourism were identified as attractions being increasingly promoted. The image analysis of Churchill stakeholder websites also substantiates this finding; the most popular images aside from polar bears were beluga whales, birds, and northern lights. In addition to the other attractions having increased marketing and promotional efforts, several participants discussed downplaying polar bear promotional efforts or promoting polar bear tourism in summer months. Scott et al. (2009) described seeing this phenomenon in Thailand during the monsoon season and at Ski resorts across North America promoting themselves as 'four season resorts'. Not only is adjusting visit timing a behaviour adaptation but is also a business management adaptation on behalf of the destination tourism stakeholders.

The Jasper study site participants also identified business management adaptations but these focused on substitution efforts, specifically the Glacier Skywalk. The new developments at the study locations show foresight for tourism operations. Many participants from the Jasper National Park site feel the Skywalk was built in preparation for when the glacier is no longer accessible. Though the skywalk may be an example of adaptive capacity, it could also be an example of a business seeing the opening to create a new attraction along the Banff to Jasper parkway. Though a good business innovation, the Skywalk may create negative perceptions of Jasper becoming urbanized. A few participants discussed that the skywalk may lead to a tramway, creating more development in the area may change the perception of Jasper being a wild space to Jasper being an urbanized environment. Although, the management plan for Jasper states that a main concern for Parks Canada is to ensure national parks have continued relevance in a changing, more urban Canada (Parks Canada, 2010). One participant commented on how vast and wild Jasper is compared to other Mountain parks. Wheeler (1995) describes how host communities who use natural assets as tourism resources must constantly update and develop the area to ensure access. This causes the existing landscape, eco-system and original attraction to be changed. Wheeler (1995) suggests “to retain the asset base and attractiveness of the host environment, other assets are constructed and the host community thus becomes dependent on man-made resources” (p. 42). It seems Jasper may be headed in this direction.

Some of the participants from Jasper also criticized Parks Canada for allowing the Skywalk development. One participant suggested a proper environmental impact assessment (EIA) was not completed prior to the Skywalk being built. It was found in the *Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation*

report that environmental assessment can help advance adaptation actions in the future. But they also state that integration of climate change adaptation strategies into restoration decision making in Canada is complex. The need to find a substitution to the glacier may have impacted the extensiveness of the EIA.

Several participants criticized Parks Canada's apparent lack of public education on climate change, suggesting Parks Canada is not using the Glacier as a valuable educational tool. Scott et al. (2009) explain that often it is local stakeholders who participate in public education. They state that few policies on climate change exist in the tourism-recreation sector and usually travel companies are the first to implement climate change education because they are in the position to do so.

These issues with Parks Canada display a sense of distrust at the Jasper National Park study location. Adger (2003) suggests trust and organizations greatly influence the capability of communities to act collectively. Communities like Jasper or Churchill who are reliant on environmental resources that are highly vulnerable to climate change must have stakeholders in their communities who can work together in order to adapt and thrive in the future. The distrust stakeholders have towards Parks Canada in Jasper may directly influence the tourism industry's ability to adapt to the changing environment.

The adaptations made at the case study sites seem to be implemented by individual businesses. To ensure there is a future for the businesses at the case study sites, the stakeholders should work together to plan long term adaptations.

5.3 Marketing Destinations

The ways in which destinations and stakeholders market the experiences they offer provides the public with expectations and the identity of the destination. Wheeler (1995) explains the “degree of satisfaction gained from the experience relates to the expectations of the tourist, the degree of reality on which those expectations were based and the ability of the tourist to adapt to perceived realities” (p. 41). The majority of the participants agreed that visitors have expectations before coming to their destinations. They also agreed the polar bears or glacier are not accurately represented in the media. Although all respondents, but one, said visitors are satisfied with their experiences, if these attractions are not accurately portrayed, their expectations may not be accurate. Many participants suggested the attractions are not accurately portrayed in some aspects from popular culture or mass media, but images from stakeholder websites show visitors what they can expect to see. Visitors may not have an understanding of how climate change is impacting these destinations, but when it comes to visitor experience, stakeholders explain visitors’ expectations are being met and the visitors are satisfied with the experiences they have.

Findings suggest stakeholders are not employing extensive marketing initiatives. To ensure long term success in these areas, Health and Wall (1992) suggest analyzing product markets and forecasting how they will change in the future is essential to organizational survival. The stakeholders at these destinations need to look to the future not only for the benefit of their business, but also to combat climate change effects. Scott et al., (2009) suggest marketing is a key business strategy that can be used to adapt to natural seasonality, climate extremes and climate change. Several stakeholders discuss diversification and how they have begun to focus marketing and promotion away from polar bears and towards other attractions. Scott et al. (2009)

reported that many resort companies around the world are doing the same and even marketing themselves as four-season destination. Destination marketing should be a focus of researchers interested in destination management and resource mitigation as marketing facilitates tourism policy, and regional development strategic planning (Buhalis, 2000).

5.4 Branding

It is interesting to note the differences from stakeholder perception of importance of the glacier and the abundance of glacier images in the website analysis. Many stakeholders from Jasper said the glacier was not a major attraction for them, but the glacier was in 27% of the website images, the next highest category was 11%.

Brand elements, slogans, taglines and images play an essential role in destination identity building (Cai et al., 2009). Nickerson and Moisey (1999) define branding as “what images people have of a destination and what kind of relationship they have with it” (p. 217). The findings from the website image analysis indicate tourism stakeholder websites from Jasper rely highly on Athabasca Glacier images, and from Churchill rely highly on polar bear images. These findings were expected as these are major attractions for either site.

One interesting finding from the website analysis was the instance of visitor uploaded picture galleries. Cai et al. (2009) describes this phenomenon stating “any tourist can be a global image-maker or story teller by uploading information onto the Internet” (p. 28). The internet enables broad communication to take place between tourists, potential tourists and destination stakeholders. Ye et al. (2011) also report that more than 74% of travelers use the comments of other consumers as information sources when planning trips for pleasure. Word of mouth, even though the internet

continues to be a significant resource for travellers when researching destinations. The findings validate Cai et al. (2009) statements, this shows destination branding and therefore marketing is not always in the organizations control with the ease of image sharing across the web.

5.5 Last Chance Tourism

Dawson et al. (2011) explains LCT is about the perception of vulnerability of a destination, therefore, a combination of marketing, public perception, values, and management techniques play significant roles in determining LCT destinations.

Previous studies conducted by Olsen et al. (2011) also asked stakeholders of their opinions of *Frommer's 500 Place to See Before They Disappear* and found a strong reluctance towards the use of LCT within marketing strategies. The findings from this study mirror those findings, except for two participants in Jasper who suggest LCT may not be negative.

Olsen et al. (2011) also reported most of the respondents in their study indicated they would not use the 'last chance tourism' phrase in their marketing for a variety of reasons, such as the phrase would give a negative view of destinations to potential visitors (Olsen et al., 2012). The findings from this study also support Olsen et al. (2011) findings; all but two participants thought LCT causes destinations to have negative connotations associated with it. One elaborated explaining LCT is a manipulative marketing technique.

The two participants from Jasper believe the glacier is a good candidate for LCT because it is receding so rapidly. One of the participants suggested that promoting last chance tourism could serve to promote policy changes and awareness to protect these

sensitive areas. While these participants suggest using LCT to make positive changes, Lemelin et al. (2010) warns while attention from LCT marketing can help raise awareness of problems, it can also attract more tourists and therefore accelerating negative impacts.

Dawson et al. (2010) examined the carbon cost of polar bear viewing in Churchill, Manitoba, finding that the majority of individuals travelling for the purpose of viewing polar bears were strongly motivated by the stated vulnerability of the species and indicated that they wanted to see the bears before they disappear forever. Only one participant from Churchill supported Dawson et al. (2010) findings. But they elaborate that visitor's perceptions are not accurate, it is not the last chance to see the polar bears because numbers are declining, but rather because it's the visitors' last chance.

An important finding from this study is that none of the stakeholders are using LCT in marketing. Most of the LCT promotions come from media sensationalism. Scott et al. (2009) explain "[LCT] from climate change threatened destinations is still rare, but an increasing marketing trend among tourism operators in regions where climate change impacts are clearly observable" (p. 183). One participant explained that once destination is on these types of 'bucket lists' developed by travel magazines, the destinations become increasingly popular. Scott et al. (2009) suggest that even when popular destinations such as Mount Kilimanjaro are described as threatened by climate change they will likely be inspirations for future articles in travel magazines and climate change related marketing.

5.6 Ethical Implications of Marketing Destinations as Last Chance Tourism

An important aspect of the findings of this study is the ethical implications of marketing destinations as LCT. While none of the participants state they market their business using LCT slogans, two participants from Jasper suggested LCT strategies may not be negative. Davis (1992) explains “a common theme of discussion about ethics and marketing is the idea of truth, specifically the distinction between consumer and scientific truth in product claims” (p. 81). All the participants from Jasper agree the glacier is receding, therefore marketing the glacier as LCT would be scientifically accurate. But, as Dawson et al. (2011) suggest, there is an inherent paradox associated with LCT. While the two participants from Jasper suggest they would use LCT to garner climate change policy support, this may not be a result of LCT marketing efforts.

Tourism marketing revolves around the creation of awareness, tourism resources, and the creation of destination image. Findings from one participant suggest LCT is about perceptions and how people perceive LCT. When considering the ethical implications of marketing tourism destinations, the marketers decisions must balance the individual ethic (individual beliefs and values), the professional ethic (those dictated by marketing professionals), and the organizational ethic (local government) (Wheeler, 1995). LCT marketing could be used in an ethical way as an education tool by stakeholders, but more often than not LCT is used in popular media to sensationalize problems, attributing to negative perception of LCT and sometimes the destination.

Chapter Six: Conclusion

This research set out to gain insights into stakeholders' perceptions of climate change, marketing and last chance tourism concerning the Athabasca Glacier at Jasper National Park and Polar Bear tourism at Churchill, Manitoba. The analysis of the 17 interviews and surveys revealed that climate change is and will pose challenges for stakeholders. Each participant revealed some unique challenges they have faced, while at the same time shared some similarities. While participants were intimately concerned with their own businesses, they all were concerned for their community's future. The majority of participants, 56%, were either moderately or extremely concerned about climate change, 18% of participants were either slightly or somewhat concerned about climate change, 15% were not at all concerned and 9% did not answer. Tourism at these locations will be severely affected by climate change, both the literature and participants agree.

This research confirms and adds detail to previous studies on adaptations and last chance tourism. Many of the participants thought LCT had negative implications, with only two suggesting they would think about using it as a marketing technique. Participants have already been making adaptations due to environmental changes, and believe they will adapt when necessary in the future. Although, some indicated they believe climate change impacts will cause their businesses to close.

While only 47% of participants said they have a marketing strategy for their specific destination, the analysis of the 40 websites revealed they use images of the Athabasca Glacier or polar bears for a majority of images. Many of the images were uploaded by previous visitors or were images of actual tours. These images attribute to the overall destination image and brand, branding is not only a useful marketing tool,

but can also be used to educate and inform potential visitors of sensitive issues at these destinations. Stakeholders can use images to educate potential visitors on climate change issues in their area.

While this exploratory study was important to understand stakeholder perceptions at each location, future studies need to examine both adaptive capacity and ethical implications of marketing LCT more in depth. Marketing LCT may lead to more people getting involved in climate change discussions, which will help create community adaptations. Regional tourism organizations did not participate in this study, future studies could explore the marketing strategies of regional tourism organizations, and their relationships with specific tour operators. The Jasper National Park data revealed stakeholder relationships are very complex with multiple participants criticizing Parks Canada for allowing recent new tourism developments. Future studies could explore deeper into these relationships, this may enable better coordination among stakeholders for planning adaptations. In addition to answering the research questions, the data showed two key topics that could be explored in future studies, visitor motivations and significance of the attractions. These topics were not explored in depth because they did not directly relate to the research questions.

A limitation of this study was that interviews were conducted by two researchers. This meant analysis was limited to participant responses taken during the interview and no additional recall notes could be used. In addition, several questions were not asked of some participants and the survey and interview varied slightly. These issues were due to temporal and financial constraints. Future studies could use

one researcher, and if feasible, traveling to the case study sites is recommended as it proved to yield a higher response rate.

References

- Adger, W.N. (2003). Social capital, collective action, and adaptation to climate change. *Economic Geography*, 79(4), 387-404.
- Adger, W. N., & Vincent, K. (2005). Uncertainty in adaptive capacity. *C. R. Geoscience*, 337, 339-410.
- Baker, I., Peterson, A., Brown, G., & McAlpine, C. (2012). Local government response to the impacts of climate change: An evaluation of local climate adaptation plans. *Landscape and Urban Planning*, 107, 127-136.
- Balmford, A., Green, J. M. H., Anderson, M., Beresford, J., Huang, C., Naldoo, R., ... Manica, A. (2015). Walk on the wild side: Estimating the global magnitude of visits to protected areas. *PLOS Biology*, 13(2), 1-6.
- Buckley, L. B., & Foushee, M. S. (2011). Footprint of climate change in US national park visitation. *International Journal of Biometeorology*, 56(6), 1173-1177.
- Buhalis, D. (1998). Strategic use of information technologies in the tourism industry. *Tourism Management*, 19(5), 409-421.
- Buhalis, D. (2000). Marketing the competitive destination of the future. *Tourism Management*, 21, 97-116.
- Cai, L. A., Gartner, W. C., & Munar, A. M. (2009). Tourism branding: Communities in action. Bingley, UK: Emerald Group Publishing Limited.
- Choi, S., Lehto, X. Y., & Morrison, A. M. (2007). Destination image representation on the web: Content analysis of Macau travel related websites. *Tourism Management*, 28, 118-129.

- Creswell, J. W. (2009). *Research design, qualitative, quantitative and mixed methods approaches (3rd Ed.)*. London: Sage
- Crowley, C., Harre, R., & Tagg, C. (2011). Qualitative research and computing: Methodological issues and practices in using QSR Nvivo and NUD*IST. *International Journal of Social Research Methodology*, 5(3), 193-197.
- Dadgostar, B., & Isotalo, R. M. (1996). Content of city destination image for near-home tourists. *Journal of Hospitality & Leisure Marketing*, 3(2), 25-34.
- Davis, J. (1992). Ethics and environmental marketing. *Journal of Business Ethics*, 11, 81-87.
- Dawson, J., Johnston, M. J., Stewart, E. J., Lemieux, C. J., Lemelin, R. H., Maher, P. T. & Grimwood, B. S. R. (2011). Ethical considerations of last chance tourism. *Journal of Ecotourism*, 10(3), 250-265.
- Dawson, J., Stewart, E. J., Lemelin, H., & Scott, D. (2010). The carbon cost of polar bear viewing tourism in Churchill, Canada. *Journal of Sustainable Tourism*, 18(3), 319-336.
- Decrop, A. (1999). Triangulation in qualitative tourism research. *Tourism Management*, 20, 157-161.
- de Freitas, C. R. (2005). The climate-tourism relationship and its relevance to climate change impact assessment. In C. M. Hall & J. Higham (Eds.), *Aspects of tourism, tourism recreation and climate change* (29-43). North York, ON: Channel View Publications.

- Derham, J. L. (2011). *An investigation of crisis management strategies utilised by Australian based tour operators in response to the Indian Ocean Tsunami (2004)*. La Trobe University, Bundoora, VIC (Unpublished Master Thesis).
- Dodds, R. (2010). Destination marketing organizations and climate change – The need for leadership and education. *Sustainability*, 2, 3449-3464
- Ebi, K. L. (2011). Policy Responses to climate change. *Elsevier*.
- Engle, N. L. (2011). Adaptive capacity and its assessment. *Global Environment Change*, 21, 647-656.
- Ernst, K. M., van Riemsdijk, M. (2013). Climate change scenario planning in Alaska's National Parks: Stakeholder involvement in the decision-making process. *Applied Geography*, 43, 22-28.
- Fawkeye, P. C., & Crompton, J. L. (1991). Image differences between prospective, first-time, and repeat visitors to the lower Rio Grande Valley. *Journal of Travel Research*, 30(2), 10-16.
- Frew, E. A. (2008). Climate change and doom tourism: Advertising destinations 'before they disappear'. In J. Fountain & K. Moore (Eds.), *Recreation tourism: Proceedings of the New Zealand Tourism and Hospitality Research Conference 2008*. Lincoln University, Canterbury, New Zealand.
- Gallopín, G. C. (2006). Linkages between vulnerability, resilience, and adaptive capacity. *Global Environmental Change*, 16, 293-303.
- Glaser, B. G., & Holton, J. (2004). Remodeling Grounded Theory. *Forum: Qualitative Social Research*, 5(2), Art 4.

- Graveland, B. (2014). Athabasca glacier could disappear within generation, says manager. *The Canadian Press*. Retrieved from <http://www.cbc.ca/news/canada/calgary/athabasca-glacier-could-disappear-within-generation-says-manager-1.2653641>
- Gupta J., Termeer, C., Klostermann, J., Meijerink, S., van den Brink, M., Jong, P., ... Bergsma, E. (2010). The adaptive capacity wheel: A method to assess the inherent characteristics of institutions to enable the adaptive capacity of society. *Environmental Science and Policy*, 459-471.
- Hall, D. (1999). Destination branding, nice marketing and national image projection in Central and Eastern Europe. *Journal of Vacation Marketing*, 5(3), 227-237.
- Hall, M. C., & Higham, J. (2005). Introduction: Tourism, recreation and climate change. In C. M. Hall & J. Higham (Eds.), *Aspects of tourism, tourism recreation and climate change* (3-28). North York, ON: Channel View Publications.
- Heath, E. & Wall, G. (1992). Marketing tourism destinations. New York, NY: John Wiley & Sons, Inc.
- Holden, A. (2008). *Environment and Tourism* (2nd E.d). London, UK: Routledge.
- Intergovernmental Panel on Climate Change (IPCC). (2014). Climate Change 2014: The Physical Science Basis. *IPCC Working Group I Contribution to AR5*. Retrieved from <http://www.ipcc.ch/report/ar5/wg1/>
- Jamal, T. & Hollinshead, K. (2001). Tourism and the forbidden zone: The underserved power of qualitative inquiry. *Tourism Management*, 22, 63-82.
- Jennings, G. (2010). *Tourism Research, Second Edition*. John Wiley and Sons: Australia.

- Jones, B., & Scott, D. (2006). Climate change, seasonality and visitation to Canada's national parks. *Journal of Park and Recreation Administration*, 24(2), 42-62.
- Khandkar S. H., (n.d.) Open Coding. *The University of Calgary*.
<http://pages.cpsc.ucalgary.ca/~saul/wiki/uploads/CPSC681/open-coding.pdf>
- Lemelin, H., Dawson, J., Stewart, E. J., Maher, P., & Lueck, M. (2010). Last-chance tourism: The boom, doom and gloom of visiting vanishing destinations. *Current Issues in Tourism*, 13(5), 477-493.
- Lemelin, R. H., Stewart, E., & Dawson, J. (2012). An introduction to last chance tourism. In R. H. Lemelin, J. Dawson, & E. J. Stewart (Eds.), *Last chance tourism: Adapting tourism opportunities in a changing world*. (pp.105-116). New York, NY: Routledge.
- Lemieux, C. J., Beechey, T. J., & Gray, P. A. (2011). Prospects for Canada's protected areas in an era of climate change. *Land Use Policy*, 28, 928-941.
- Mackay, K. J., & Couldwell, C. M. (2004). Using visitor-employed photography to investigate destination image. *Journal of Travel Research*, 42(4), 390-396.
- Malterud, K. (2001). Qualitative research: standards, challenges, and guidelines. *The Lancet*, 358, 483-488.
- Manitoba Health Population Report. (2011). Population of Churchill RHA. Retrieved from <http://www.gov.mb.ca/health/population/2011/3/churchill.pdf>
- Mason, J. (1996). *Qualitative Researching*. London: Sage.
- Miguens, J., Baggio, R., & Costa, C. (2008). Social media and tourism destination: TripAdvisor Case Study. *Advances in Tourism Research*, 1-6.

- Mohsin, A. (2005). Tourist attitudes and destination marketing – the case of Australia's Northern Territory and Malaysia. *Tourism Management* 26, 723-732.
- Municipality of Jasper. (2011). Population. Retrieved from <http://jasper-alberta.com/default.aspx?pageid=330>
- Nickerson, N., & Moisey, R. (1999). Branding a state from features to positioning: Making it simple? *Journal of Vacation Marketing*, 5, 217-226.
- Olsen, D. H., Koster, R. L., Youroukos, N. (2012). Last chance tourism? Public sector views of marketing endangered tourism destinations in North America. In R.H. Lemelin, J. Dawson, & E. J. Stewart (Eds.), *Last chance tourism: Adapting tourism opportunities in a changing world*. (pp.105-116). New York, NY: Routledge.
- Outspan Group. (2009). The economic impact of Canada's National, Provincial & Territorial Parks in 2009. *Canadian Parks Council*. Retrieved from http://www.parks-parcs.ca/english/pdf/econ_impact_2009_part1.pdf
- Parks Canada. (2007) Management Plan. *Wapusk National Park of Canada*.
- Parks Canada. (2010). Highlights. *Jasper National Park of Canada Management Plan*.
- Parks Canada. (2011). Annual Report. *Jasper National Park of Canada*.
- Parks Canada. (2012). How to get there. *Wapusk National Park of Canada*. Retrieved from <http://www.pc.gc.ca/eng/pn-np/mb/wapusk/visit/visit1.aspx>
- Parks Canada. (2014a). Columbia Icefield area and the Athabasca Glacier. *Jasper National Park*. Retrieved from <http://www.pc.gc.ca/eng/pn-np/ab/jasper/activ/explore-interets/glacier-athabasca.aspx>

- Parks Canada. (2014b). How to get there. *Wapusk National Park of Canada*. Retrieved from <http://www.pc.gc.ca/eng/pn-np/mb/wapusk/visit/visit1.aspx>
- Sautter, E. T., & Leisen, B. (1999). Managing stakeholders: A tourism planning model. *Annals of Tourism Research*, 26(2), 312-328.
- Scott, D., de Freitas, C., & Matzarakis, A. (2009). Adaptation in the tourism and recreation sector. In K. L. Ebi et al. (Eds.), *Biometeorology for Adaptation to Climate Variability and Change* (171-194). Springer Science + Business Media.
- Scott, D., Jones, B., & Konopek, J. (2007). Implications of climate and environmental change for nature-based tourism in the Canadian rocky mountains: A case study of Waterton Lakes national park. *Tourism Management*, 28, 570-579.
- Scott, D., & Lemieux, C. (2010). Weather and climate information for tourism. *Procedia Environmental Sciences*, 1, 146-183.
- Scott, D., Wall, G., & McBoyle, G. (2005). The evolution of the climate change issue in the tourism sector. In C. M. Hall & J. Higham (Eds.), *Aspects of tourism, tourism recreation and climate change* (44-62). North York, ON: Channel View Publications.
- Smit, B., Burton, I., Klein, R. J. T., Street, R. (1999). The science of adaptation: A framework for assessment. *Mitigation and Adaptation Strategies for Global Change*, 4, 199-213.
- Smit, B., & Wandel, J. (2006). Adaptation, adaptive capacity and vulnerability. *Global Environmental Change*, 16, 282-292.

- Statistics Canada. (2015a). Census Profile. *Churchill, Manitoba*. Retrieved from <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=4623056&Geo2=PR&Code2=46&Data=Count&SearchText=Churchill&SearchType=Begins&SearchPR=01&B1=All&Custom=>
- Statistics Canada. (2015b). Census Profile, Jasper, Alberta. Retrieved from <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/details/page.cfm?Lang=E&Geo1=POPC&Code1=1174&Geo2=PR&Code2=48&Data=Count&SearchText=Jasper&SearchType=Begins&SearchPR=01&B1=All&Custom=&TABID=1>
- Stewart, E., Dawson, J., & Lemelin, R. H. (2012). The transformation of polar bear viewing in the Hudson Bay region, Canada. In R. H. Lemelin, J. Dawson, & E. J. Stewart (Eds.), *Last chance tourism: Adapting tourism opportunities in a changing world*. (pp.89-102). New York, NY: Routledge.
- Stirling, I., & Parkinson, C. L. (2006) Possible effects of climate warming on selected populations of polar bears (*Urses maritimus*) in the Canadian Arctic. *Arctic*, 59(3), 261-275.
- Strandberg, C. (2010). Columbia Icefield shrinking fast. *University of Saskatchewan*. Retrieved from <http://www.usask.ca/ip3/download/Rocky%20Mountain%20Outlook%204%20Feb%202010%20-%20Columbia%20Icefield%20shrinking%20fast.pdf>
- Strauss, A. & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Thousand Oaks, CA: Sage.

- Timothy, D. J., & Groves, D. I. (2001). Webcam images as potential data sources for tourism research. *Tourism Geographies*, 3(4), 394-404.
- Town of Churchill. (2014). Welcome. Retrieved from <http://www.churchill.ca/>
- Travel Alberta. (2013). Jasper National Park. Retrieved from <http://travelalberta.com/Places%20to%20Go/Parks/Jasper%20National%20Park.aspx?view=map>
- Trunfio, M., Petruzzellis, L., & Nigro, C. (2006). Tour operators and alternative tourism in Italy. *International Journal of Contemporary Hospitality Management*, 18(5), 426-438
- Wall, H. (1992). *Marketing tourism destinations*. Toronto, ON: John Wiley & Sons Inc.
- Walle, A. H. (1995). Business ethics and tourism: From micro to macro perspective. *Tourism Management*, 16(4), 263-268.
- Warren, F. J., & Lemmen, D. S. (Eds.). (2014). Canada in a changing climate: Sector perspectives on impacts and Adaptation. *Government of Canada*, Ottawa, ON, 1-286.
- Welsh, E. (2002). Dealing with data: Using Nvivo in the qualitative data analysis process. *Forum: Qualitative Social Research*, 3(2), Art 26.
- Wheeler, M. (1995). Tourism marketing ethics: An introduction. *International Marketing Review*, 12(4), 38-49.
- Wilson, J., Espiner, S., Stewart, E., Purdie, H., & Depatie, C. (2014). Glacier tourism on the west coast of New Zealand: Last chance to see or business as usual? CAUTHE

2014: Tourism and Hospitality in the Contemporary World: Trends, Changes and Complexity. Brisbane: School of Tourism, The University of Queensland.

Wolcott, H. F. (2009). *Writing up qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.

Ye, Q., Law, R., Gu, B., & Chen, W. (2011). The influence of user-generated content on traveler behaviour: An empirical investigation on the effects of e-word-of-mouth to hotel online bookings. *Computers in Human Behaviour*, 27, 634-639.

Yin, R. K. (2014). *Case study research design and methods*. Thousand Oaks, CA: Sage.

Appendices

Appendix A: Jasper Email Recruitment Letter

Hello,

My name is Bobbie Swartman, I am a graduate student from the Department of Recreation and Leisure Studies at the University of Waterloo. I am helping conduct a study that focuses on tourism in Jasper National Park. The Athabasca Glacier is a significant tourist destination in Jasper National Park and as the glacier continues to retreat there is uncertainty in predicting tourists' responses to future landscape conditions at the site. Therefore, I would like to invite you to participate in an interview that will help in our effort to better understand the implications of climate-induced change at the Athabasca Glacier and how it will affect visitor behavior, stimulate change in tourism products, and affect management decisions pertaining to conservation and visitor use. This research is being conducted on behalf of Dr. Chris Lemieux from Wilfrid Laurier University in collaboration Dr. Jackie Dawson from the University of Ottawa.

Participation in this study is voluntary and will involve an interview of approximately 30 minutes in length and will take place by telephone. Telephone interviews will take place anytime between October 1, 2014 and November 1, 2014. Alternatively, I can forward you a MS Word version of the questionnaire if you wish to participate but would prefer to respond to the questions at your convenience.

If you decide to participate, you will be provided with a copy of the questions ahead of time in order to prepare for the interview and may decline to answer any of the questions if you so wish. All information you provide is considered completely confidential and you may withdraw from this study at any time without any negative consequences by advising the researcher. At no point during the interview will we ask for your name.

This study has been reviewed and received ethics clearance through the Office of Research Services at Wilfrid Laurier University in Ontario. However, the final decision about participation is yours. Should you have any comments or concerns resulting from your participation in this study, please contact Dr. R. Basso - rbasso@wlu.ca / 519-884-0710 x4994.

Your participation is key to improving our understanding of last chance tourism and climate-induced change at the Athabasca Glacier in Jasper National Park. If you have any questions about this study, or would like additional information to assist you in reaching a decision about participation, please feel free to contact Dr. Christopher Lemieux at 519-884-0710 ext. 4765 or clemieux@wlu.ca.

If you are interested in participating in an interview, please forward your confirmation to me via e-mail at your earliest convenience.

Thank you for your consideration. We look forward to hearing back from you.

Sincerely,

Bobbie Swartman

Appendix B: Churchill Email Recruitment Letter

Hello,

My name is Bobbie Swartman, I am a graduate student from the Department of Recreation and Leisure Studies at the University of Waterloo. I am helping conduct a study that focuses on tourism in Churchill region. As you are aware, polar bears are a significant tourist attraction in Churchill region and as the natural environment continues to change there is uncertainty in predicting how tourists' will respond. Therefore, I would like to invite you to participate in an interview that will help in our effort to better understand how environmental change will affect visitor behavior, stimulate change in tourism products and affect management decisions relating to conservation and visitor use. This research is being conducted on behalf of Dr. Chris Lemieux from Wilfrid Laurier University in collaboration Dr. Jackie Dawson from the University of Ottawa.

Participation in this study is voluntary and will involve an interview of approximately 30 minutes in length and will take place by telephone. Telephone interviews will take place anytime between October 1, 2014 and November 1, 2014. Alternatively, I can forward you a MS Word version of the questionnaire if you wish to participate but would prefer to respond to the questions at your convenience.

If you decide to participate, you will be provided with a copy of the questions ahead of time and may decline to answer any of the interview questions if you so wish. All information you provide is considered completely confidential and you may withdraw from this study at any time without any negative consequences by advising the researcher. At no point during the interview will we ask for your name.

This study has been reviewed and received ethics clearance through the Office of Research Services at Wilfrid Laurier University in Ontario. However, the final decision about participation is yours. Should you have any comments or concerns resulting from your participation in this study, please contact Dr. R. Basso - rbasso@wlu.ca / 519-884-0710 x4994.

If you have any questions about this study, or would like additional information to assist you in reaching a decision about participation, please feel free to contact Dr. Christopher Lemieux at 519-884-0710 ext. 4765 or clemieux@wlu.ca.

If you are interested in participating in an interview, please forward your confirmation to me at your earliest convenience.

Sincerely,

Bobbie Swartman

Appendix C: Formal Jasper Recruitment Letter



This letter is an invitation to consider participating in a study that focuses on tourism in Jasper National Park and Wapusk National Park. This research is being conducted on behalf of Dr. Chris Lemieux from Wilfrid Laurier University in collaboration with Dr. Jackie Dawson from the University of Ottawa. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

This study will focus on last chance tourism, which is an emerging travel phenomenon whereby people visit disappearing destinations, such as glaciers and polar bears, in parks. The Athabasca Glacier is a significant tourist destination in Jasper National Park and as the glacier retreats and the landscape conditions change it is uncertain how tourists' will respond. Therefore, this research aims to better understand the implications of climate-induced change over time at the Athabasca Glacier and how it will affect visitor behavior, stimulate change in tourism products and affect management decisions and policy relating to conservation and visitor use.

The interview seeks to explore the importance of the Athabasca Glacier as a visitor attraction, understand the current visitor experience and consider how it might change based on future scenarios, identify current perceptions and experiences of climate-induced change at the glacier and understand the business and management implications of climate-induced change. Your participation is key to improving our understanding of last chance tourism and climate-induced change at the Athabasca Glacier in Jasper National Park.

If you decide to participate, you may withdraw from this study at any time without any negative consequences by advising the researcher. You will be provided a copy of the questions ahead of time and may decline to answer any of the interview questions if you so wish. With your permission, the interview will be transcribed using pen and paper and will not be recorded. After the interview has been completed, I will send you a copy of the transcript to give you an opportunity to confirm the accuracy of our conversation and to add or clarify any points that you wish.

All information you provide is considered completely confidential. Your name will not appear in any thesis or report resulting from this study however, with your permission anonymous quotations may be used. Data collected during this study will be retained indefinitely in a locked office in my supervisor's lab and only researchers associated with this project will have access to it. There are no known or anticipated risks to you as a participant in this study.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact Dr. Christopher Lemieux at 519-884-0710 ext. 4765 or email clemieux@wlu.ca.

This study has been reviewed and received ethics clearance through the Office of Research Services at Wilfrid Laurier University in Ontario. We have also received permission from Parks Canada to conduct the research in this park. However, the final decision about participation is yours. Should you have any comments or concerns resulting from your participation in this study, please contact Dr. R. Basso - rbasso@wlu.ca / 519-884-0710 x4994.

I hope that the results of this study will be of benefit to your organization as well as to the broader parks and protected areas research community.

I very much look forward to speaking with you and thank you in advance for your assistance in this project.

Yours Sincerely,

Bobbie Swartman

Appendix D: Formal Churchill Recruitment Letter



This letter is an invitation to consider participating in a study that focuses on last chance tourism in Jasper National Park and Churchill Manitoba. This research is being conducted on behalf of Dr. Chris Lemieux from Wilfrid Laurier University in collaboration with Dr. Jackie Dawson from the University of Ottawa. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

Polar bears are a significant tourist attraction in Churchill and as the polar bear population declines and conditions change it remains uncertain how tourists' will respond. Therefore, this research aims to better understand the implications of climate-induced change over time on the polar bear population and how it will affect visitor behavior, stimulate change in tourism products and affect management decisions and policy relating to conservation and visitor use.

The interview/survey seeks to explore the importance of the polar bears as a visitor attraction, understand the current visitor experience and consider how it might change based on future scenarios, identify current perceptions and experiences of climate-induced change on the polar bear population and understand the business and management implications of climate-induced change. Your participation is key to improving our understanding of last chance tourism and climate-induced change on the polar bears in Churchill.

All information you provide is considered completely confidential. Your name will not appear in any thesis or report resulting from this study however, with your permission anonymous quotations may be used. Data collected during this study will be retained indefinitely in a locked office in my supervisor's lab and only researchers associated with this project will have access to it. There are no known or anticipated risks to you as a participant in this study.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact Dr. Christopher Lemieux at 519-884-0710 ext. 4765 or email clémieux@wlu.ca.

This study has been reviewed and received ethics clearance through the Office of Research Services at Wilfrid Laurier University in Ontario. We have also received permission from Parks Canada to conduct the research in this park. However, the final decision about participation is yours. Should you have any comments or concerns resulting from your participation in this study, please contact Dr. R. Basso - rbasso@wlu.ca / 519-884-0710 x4994.

I hope that the results of this study will be of benefit to your organization as well as to the broader parks and protected areas research community. I very much look forward to speaking with you and thank you in advance for your assistance in this project.

Yours Sincerely,

Bobbie Swartman

Appendix E: Informed Consent Form

CONSENT FORM

By signing this consent form, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities.

I have read the information presented in the information letter about a study being conducted on behalf of Dr. Chris Lemieux (Wilfrid Laurier University) for his research in collaboration with Dr. Jackie Dawson (University of Ottawa). I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I am aware that I have the option of allowing my interview to be transcribed using pen and paper to ensure an accurate recording of my responses.

I am also aware that excerpts from the interview may be included in the thesis and/or publications to come from this research, with the understanding that the quotations will be anonymous.

I was informed that I may withdraw my consent at any time without penalty by advising the researcher.

This project has been reviewed by, and received ethics clearance through, the Office of Research Services at Wilfrid Laurier University. I was informed that if I have any comments or concerns resulting from my participation in this study, I may contact the REB Chair, Dr. R. Basso - rbasso@wlu.ca / 519-884-0710 x4994.

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

☐YES ☐NO

I agree to the use of anonymous quotations in any thesis or publication that comes of this research.

☐YES ☐NO

Participant Name: _____ (Please print)

Participant Signature: _____

Witness Name: _____ (Please print)

Witness Signature: _____

Date: _____

Appendix F: Jasper Interview Guide

STAKEHOLDER INTERVIEWS:

Athabasca glacier, Jasper national park

A) Respondent Information & organizational background

1. What is your organization/businesses' sector and market focus?
2. What is your organization/businesses' employment base (i.e., local/non-local workers, seasonal workers, total number of employees, supported by government employment programs)?
3. For how long has your organisation/business been in operation?
4. What are the range of visitor experiences currently provided by your organization/business?
5. How long have you personally been working for your current organization/business?
6. How long have you personally been working in the tourism sector more broadly?

B) Importance of the Athabasca glacier

1. What is the significance of the Athabasca Glacier in terms of:
 - i. Tourism and being a visitor attraction?
 - ii. Economic impact on the region?
 - iii. Educational resource (for nature, conservation, and climate change)?
2. Can you describe what the Athabasca Glacier 'means' or represents to your organisation/business?

3. Do you think your organization/business is dependent on the Athabasca Glacier? If so, to what extent (e.g., high, medium, low)?

C) Visitor experiences: motives, expectations, satisfaction

1. Why do you think visitors come to Jasper National Park?

Follow -up:

- i. Do you think the glacier a major draw/the *primary* attraction?
 - ii. In your opinion, have visitors motivations changed over time?
 - iii. Do you think visitors have certain expectations before experiencing the glacier? If so, what do you think informs these expectations?
 - iv. Do you think visitors have an understanding of how the glacier is changing?
2. Do you think visitors are satisfied with their glacier experience?
 - i. How important do you think it is for tourists to be able to see the glacier (visibility)?
 - ii. How important do you think it is for tourists to be able to walk on the glacier (access)?
 - iii. Do you think visitor satisfaction to the area has changed over time?
 3. Does your organization/business have a certain strategy in marketing/promoting the glacier to potential visitors?

Follow-up:

- i. In general, do you think the glacier is accurately portrayed in current marketing and promotional materials?
- ii. How do you think the media and travel guides such as Frommer's "500 Places to See Before They Disappear," influence perceptions of the glacier? (Columbia Icefields #203)
- iii. In your opinion, does this influence visitation to the glacier?

D) Environmental context: Climate change

- 1. In your own experience, can you describe how the glacier has changed over time with respect to:
 - i. Glacial extent?
 - ii. Aesthetics (e.g., colour and debris)?
 - iii. Surrounding conditions?
- 2. Do you think climate and associated environmental change has implications for your organization/business, in terms of:
 - i. Access to the glacier?
 - ii. Visitor safety?
 - iii. How the tourism experience at the glacier is marketed/promoted?
- 3. Do you think the changing nature of the glacier will expose your organization/business to certain risks?

E) Adaptive strategies

- 1. Do you think that visitor behaviour is changing, in response to the retreat of the glacier?

2. What actions/strategies has your organisation/business adopted to deal with the retreat of the glacier?
 - i. Do you feel your business/organization has been proactive?

Follow-up:

- i. What actions/strategies have Jasper National Park managers taken to deal/cope with changes in the environmental condition of the glaciers? How successful have those actions/strategies been?
 - ii. Has your agency influenced the implementation of any actions/strategies amongst other organization/business operating in the region in order to more effectively deal with/cope with changes in the changing nature of the glacier?
3. Are you aware of any actions/strategies taken by other organizations/businesses within the tourism sector to adapt to the changing nature of glaciers?
4. What adaptations (actions/strategies) do you anticipate in the future?

F) Future Implications

1. Do you think tourists will continue to visit the area under the following scenario for 2050?

Current:



Future (2050):



2. If the glaciers continue to retreat, what are the implications for residents of the Jasper region; for tourists; for local business and for your organisation/business?

F) Other Information

How concerned are you about climate change personally?

- ☐ Not at all concerned
- ☐ Slightly concerned
- ☐ Somewhat concerned

- ☐ Moderately concerned
- ☐ Extremely concerned

How concerned are you about climate change for your organization/business?

- ☐ Not at all concerned
- ☐ Slightly concerned
- ☐ Somewhat concerned
- ☐ Moderately concerned
- ☐ Extremely concerned

Thank you for your time! We appreciate the input you have provided for our study.

Appendix G: Churchill Interview Guide

STAKEHOLDER INTERVIEWS:

Churchill Region & Significance of Polar Bears

A) Respondent Information & organisational background

1. What is your organization/businesses' sector and market focus?
2. What is your organization/businesses' employment base (i.e., local/non-local workers, seasonal workers, total number of employees, supported by government employment programs)?
3. For how long has your organisation/business been in operation?
4. What are the range of visitor experiences currently provided by your organization/business?
5. How long have you personally been working for your current organization/business?
6. How long have you personally been working in the tourism sector more broadly?

B) Importance of the Polar Bears

1. What is the significance of polar bears in terms of:
 - i. Tourism and being a visitor attraction?
 - ii. Economic impact on the region?
 - iii. Educational resource (for nature, conservation, and climate change)?
2. Can you describe what the polar bears 'mean' or represent to your organisation/business?

3. Do you think your organization/business is dependent on polar bears? If so, to what extent (e.g., high, medium, low)?

C) Visitor experiences: motives, expectations, satisfaction

1. Why do you think visitors come to the Churchill Region?
 - i. Do you think viewing the polar bears is a major draw/the primary attraction?
 - ii. In your opinion, have visitors motivations changed over time?
 - iii. Do you think visitors have certain expectations before experiencing the polar bears? If so, what do you think informs these expectations?
 - iv. Do you think visitors have an understanding of how polar bear populations are being affected by environmental change?
2. Do you think visitors are satisfied with their polar bear viewing experience?
3. Does your organization/business have a certain strategy in marketing/promoting the polar bears to potential visitors?
 - i. In general, do you think that polar bears are accurately portrayed in current marketing and promotional materials?
 - ii. How do you think the media and travel guides such as Frommer's "500 Places to See Before They Disappear," influence perceptions of polar bears and the Churchill Region more broadly?
 - iii. In your opinion, does this influence visitation to the Churchill Region?

D) Environmental context: Climate change

1. In your own experience, can you describe how the polar bears have changed over time (if at all) and with respect to:
 - i. The number of polar bears?
 - ii. Physical Appearance (e.g., condition of polar bears)?
 - iii. Surrounding conditions?
2. Do you think climate and associated environmental change has implications for your organization/business, in terms of:
 - i. Access to the polar bears?
 - ii. Visitor safety?
 - iii. How the tourism experience in the Churchill Region is marketed/promoted?
3. Do you think the changing nature of the polar bears (e.g., movement North in search of favourable climate conditions and habitat) will expose your organization/business to certain risks?

E) Adaptive strategies

1. Do you think that visitor behaviour is changing, in response to the changing conditions of the polar bears?
2. Has your organization/business adopted any actions/strategies to deal with the changing conditions of the polar bears?
 - i. What actions/strategies have park managers taken to deal/cope with changes in the environmental condition of the polar bear populations (e.g., Wapusk National Park/Churchill Wildlife Management Area)? How successful have those actions/strategies been?

- ii. Have park agencies in the region influenced the implementation of any actions/strategies within your organization/business to deal with/cope with changes in the changing nature of the polar bears?
- 3. Are you aware of any actions/strategies taken by other organizations/businesses within the tourism sector to adapt to the changing nature of polar bears?
- 4. What adaptations (actions/strategies) do you anticipate in the future?
- 5. If the polar bears begin to move in response to environmental changes, what are the implications for residents of the Churchill Region; for tourists; for local business and for your organisation/business?

F) Other Information

How concerned are you about climate change personally?

- ☐ Not at all concerned
- ☐ Slightly concerned
- ☐ Somewhat concerned
- ☐ Moderately concerned
- ☐ Extremely concerned

How concerned are you about climate change for your organization/business?

- ☐ Not at all concerned
- ☐ Slightly concerned
- ☐ Somewhat concerned
- ☐ Moderately concerned
- ☐ Extremely concerned

Thank you for your time! We appreciate the input you have provided for our study.